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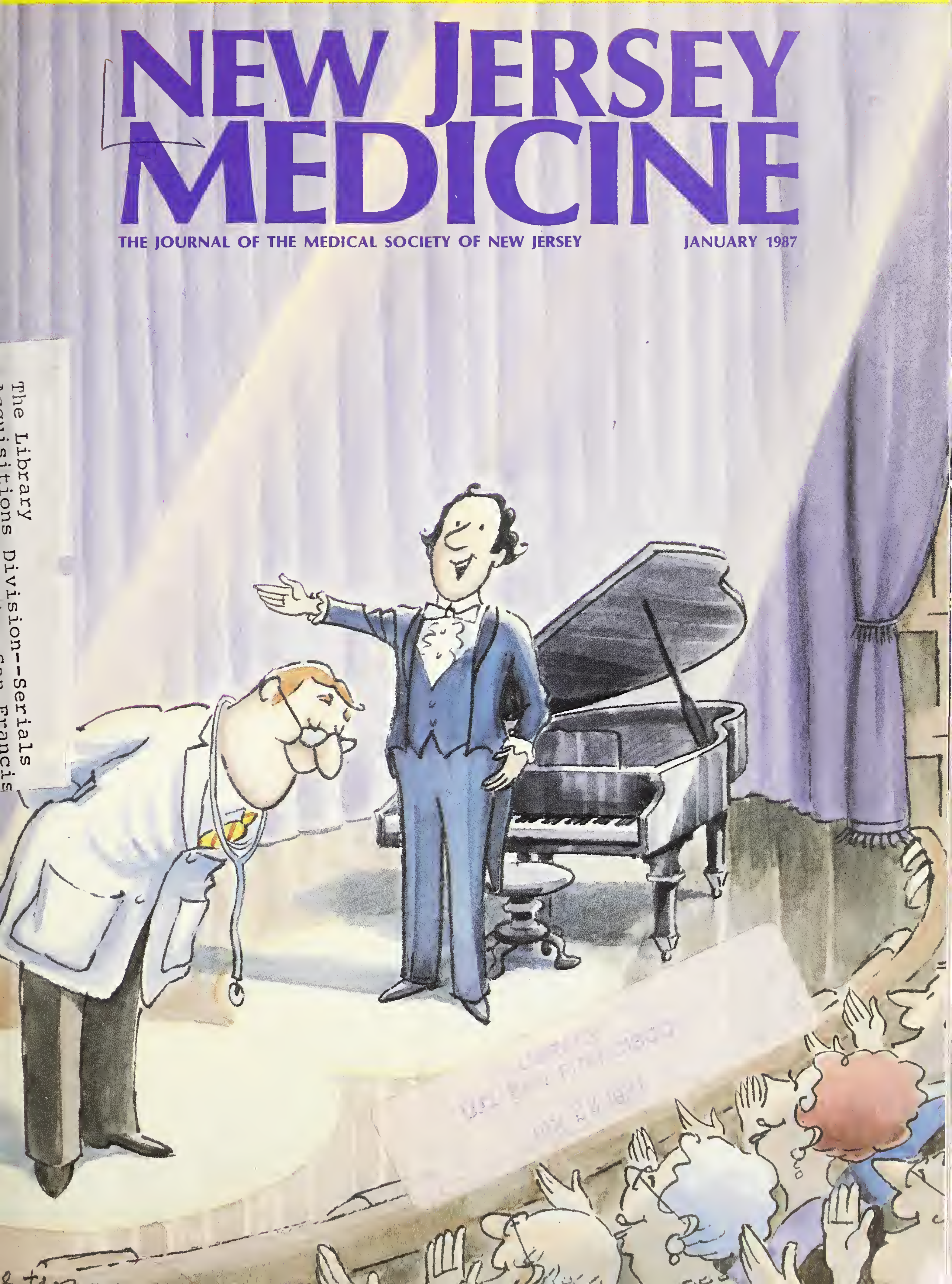
THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY JANUARY 1987



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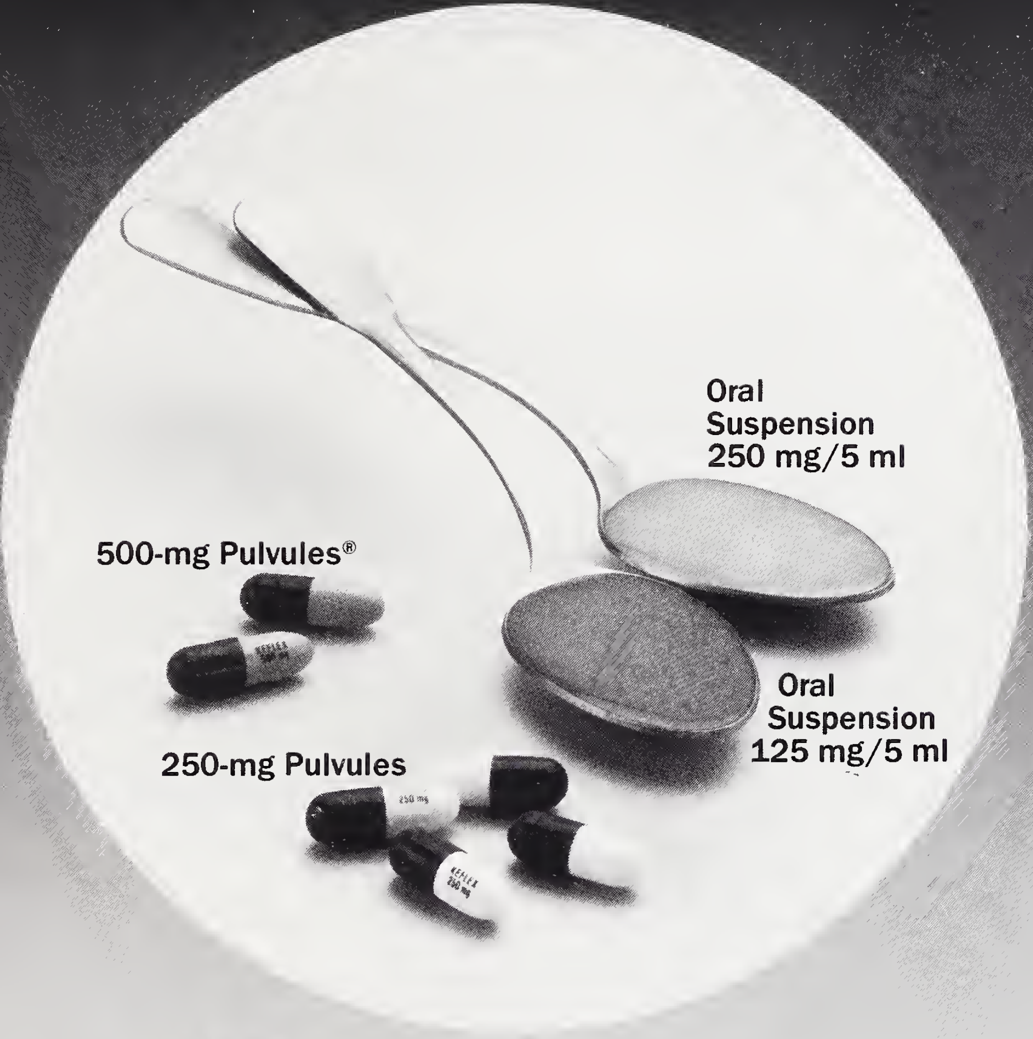

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THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY JANUARY 1987

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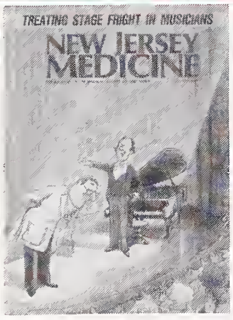

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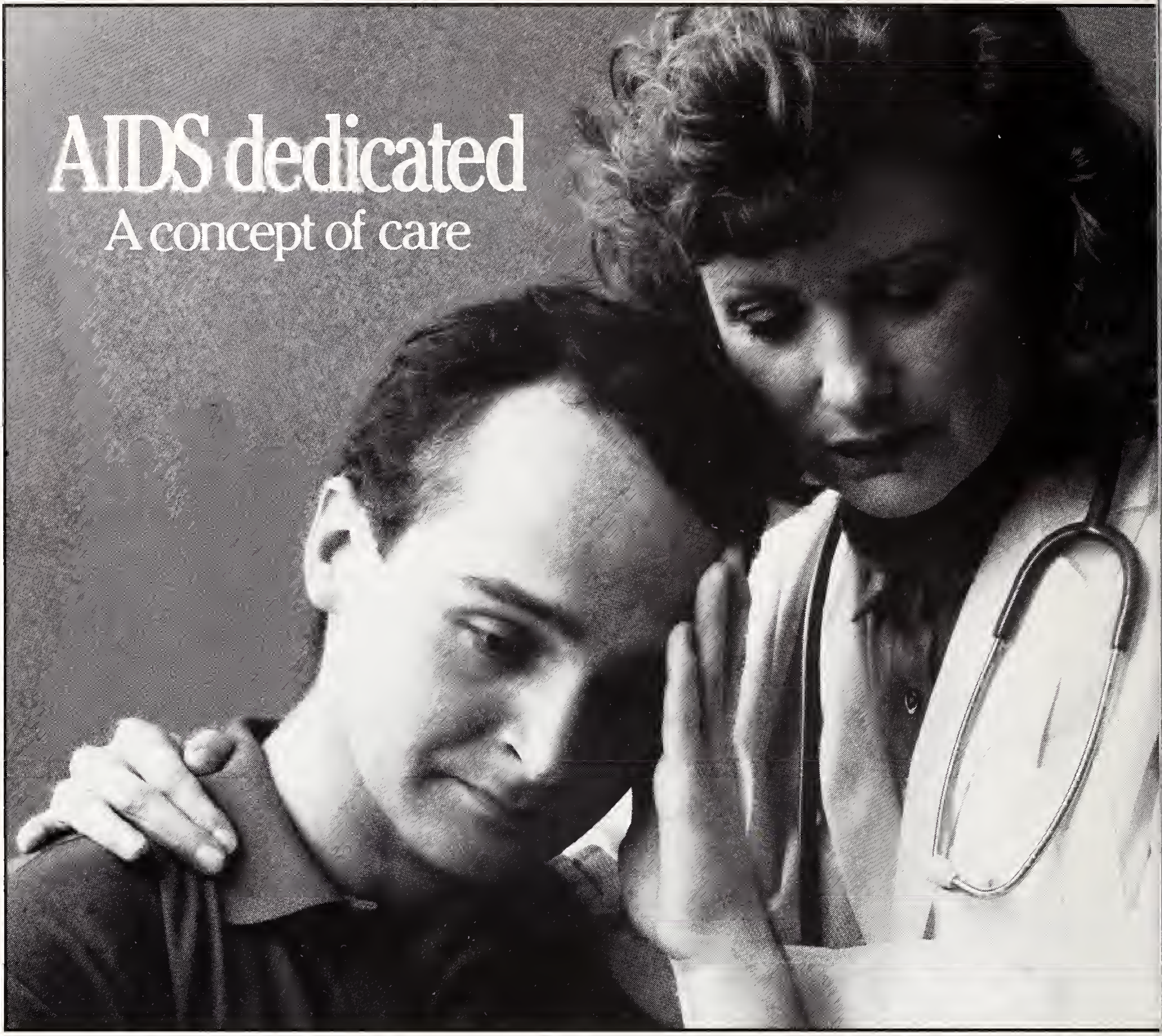

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MEMBERSHIP NEWSLETTER

MSNJ

THE MEDICAL SOCIETY OF NEW JERSEY VOLUME 39

EXAMINATION OF MEDICARE AND MEDICAID PROGRAMS: ASSEMBLY HEALTH AND HUMAN RESOURCES COMMITTEE

Ralph Kristeller, M.D., a board certified internist and chairman of MSNJ's newly announced Task Force Coalition with Senior Citizens spoke at the public hearing on Medicare/Medicaid:

The Task Force was designed because the Medical Society of New Jersey, which represents 10,000 of New Jersey's 12,000 physicians, has become increasingly concerned with the gradual deterioration in the quality of the health care delivery system, particularly as it relates to the elderly.

Consequently, the Medical Society has formed a task force of physicians to meet and establish dialogue with senior citizens. These meetings are to have a dual purpose (1) To create a forum which will afford an opportunity for the elderly to express their concerns about the delivery of health care; and (2) To create an understanding of how current and proposed regulations will impact on the delivery of health care.

Physicians in their role as patient advocates of quality health care, together with the strong political influence of senior citizens, can stem the tide of government interference in the delivery of quality health care.

One result of this Task Force endeavor is the Senior Citizen Medical Courtesy Program. This program has been formulated jointly by the Union County Medical Society and the Senior Citizen Council of Union County. The purpose of the program is to provide access to private medical care by the elderly who might otherwise forego seeking medical assistance for financial reasons.

Briefly stated, eligible senior citizens are identified by the Senior Citizen Council. The Council notifies the county medical society, which provides an access card and a list of volunteer physicians to the patient. The volunteer physicians agree to accept assignment billing only for the required deductibles and co-pay. Furthermore, if a patient presently is receiving care from a private physician and meets the eligibility requirements, the Society—at the patient's request—will notify that private physician and request that he also accept assignment as above. This is a pilot program which rapidly is spreading to other counties because of Medical Society leadership.

The best testimony that I can supply to this concerned body with regard to the impact of present programs on the delivery of health care comes from an excerpt from a brief speech I had the opportunity to deliver before the AMA Hospital Medical Staff Section at its national annual meeting this past June:

> Physicians have been the chief architects and principal guardians of the finest health care system in the world—for one purpose: the benefit of patients. We are now blamed because quality care for all cannot be delivered at the price people want to pay. This promise was made by government in spite of our advice that the situation could get out of hand.
>
> The ease with which our government makes promises and then breaks its commitments to its people is causing a crisis in credibility.
>
> This practice, which first affected the medical profession, now is being felt by students, farmers, military personnel, veterans, investors, municipal governments, and senior citizens.
>
> In 1966, the United States government promised its citizens that at age 65 they would receive almost full and unlimited medical coverage. Now, 20 years later, their care is suddenly rationed at an age when they cannot possibly adjust.
>
> If our government, admitting it made a miscalculation, tells my 20-year-old children there will be limits to government support, I can understand, and they—unlike the elderly—can live within those circumstances. Professionals cannot tolerate this practice of broken commitments.
>
> A second current practice that professionals actively oppose is the substitution of schemes for policy.
>
> Schemes are used to achieve self-interest goals. In medicine we have certificates of need, DRG, capitation, etc.—one follows the collapse of its predecessor.
>
> Professionals demand policy based on prudence, wisdom, and insight. We physicians work out new methods in the laboratory. They then are used for general application only after thorough investigation for efficacy, safety, and cost effectiveness. We expect the same from government.

We are the last of the professionals.

War is too important to leave to the generals—so we lost Korea and Vietnam.

Teaching is too important to leave to the teachers—so Johnny can't read.

Law enforcement is too important to leave to policemen—so we have mayhem in the streets.

Medicine is too important to leave to physicians—so the government forces us to replace the art of healing with its cookbook standards. It has all but eradicated funds for the science of medicine, and it hampers the business of medicine by freezing our fees. We are the only segment of the economy where this applies. There are politicians and entrepreneurs who have a vested interest in the erosion of professionalism. With professionals eliminated, they are free to continue to devise schemes for their own self-interest.

In a world that has gone astray, as exemplified by easily broken commitments, schemes masquerading as policy, and the erosion of professionalism, it is imperative that we, the medical profession, keep our heads.

At one of our recent meetings with senior citizens, I was told that government never admits to making a mistake—that's politics. I replied, "Yes—that is, until you say no more." There was silence in the room.

It is clear to me that all of us here today should be here for one purpose: to demand that our government meet its commitments to its people; to demand that our government admit it made a mistake, and devise real policy for the next generation; to demand real policy based on wisdom, prudence, and insight; to demand that professionalism be maintained as the cornerstone of the patient-physician relationship.

LOST AND FOUND

We are in possession of a Motorola paging device (Spirit Model). This was left in the House of Delegates after the November 9, 1986, meeting at the Hyatt Regency Princeton. Please contact Martin E. Johnson at the Executive Offices, (609) 896-1766, if this is your unit.

FULL MOON CAN GET YOU

Larger and larger magnets are being used for clinical NMR studies, including evaluation of any possible biological effects. But some researchers who also want answers to these questions of potential biological effects of magnetism are looking to far larger magnets—the earth and the moon.

Ralph W. Morris, Ph.D., professor of pharmacology, University of Illinois Medical Center, Chicago, says several centers have been examining possible relationships between the phase of the moon and such things as childbirth, anxiety, aggressiveness, and response to drugs. At the Chicago center, preliminary data indicate that in 38 patients, ulcers were more likely to bleed just before the full lunar phase (earth, sun, and moon in a direct line), while 64 percent of angina pectoris attacks experienced by 88 patients occurred between the full and last-quarter moon.

Some scientists suggest that answers in part may lie in gravitational and electromagnetic field changes, Morris says. While no one has pinpointed a precise cause-and-effect relationship between the moon and human physical or emotional processes, Morris notes that the moon's weak magnetism affects the earth's metal (primarily iron)-induced magnetic field. Thus, the hypothesis remains that magnetic interaction between the earth and moon may be involved in some human physiological or psychological changes.

"Magnetic influence between the earth and moon is about 0.5 gauss" (a measure of magnetic intensity), Morris says, and "fluctuations of only 0.1 gauss are enough to cause magnetic changes."

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THE SOAP OPERA

Act I. In late 1985, both houses of the Massachusetts legislature passed a bill requiring all physicians who treat Medicare patients to accept assignment, taking the Medicare payment as payment in full. In true soap opera fashion, this bill was passed unanimously by both houses. This especially was surprising since the legislature in Massachusetts—or any other state—is rarely unanimous about anything, even such matters as the number of hours in the day, the number of days in the week, the site of the state capitol, or the phases of the moon.

Act II. In a sane society, the governor of a state can be expected to veto any irrational bill passed by the legislature. After all, the chief executive is responsible for the implementation of the law. The penalty for noncompliance in this bill is revocation of the license to practice medicine in the Commonwealth of Massachusetts. Since the state medical board, which would have enforcement responsibility under the bill, opposed the legislation, it seemed obvious that the governor would veto it with a clear memorandum of opposition. He certainly would state that receiving a license in Massachusetts is contingent on satisfactory completion of a scientific premedical and medical school education, successful performance during residency training, a passing grade on a demanding licensure examination, and evidence of good moral character. Any other requirement, irrelevant to these fundamental standards for medical licensure anywhere in the nation, would surely be unconstitutional and unenforceable. The chief executive would recognize this and refuse to approve the bill. The governor of Massachusetts proved that logic does not always control governmental action—he signed the bill into law to celebrate the 1985 holiday season.

Act III. Predictably, the medical profession was very disturbed by these events. The state medical board was faced with enforcement of an irrational and unpalatable law. The medical society saw the law as the next step in governmental efforts to change the practice of medicine into a fully regulated public utility. Fortunately, our government is one of checks and bal-

Official Federation Summary of Formal Disciplinary Actions Reported for 1985

State Board	*License Revocation Code 100*	*Probation (Alone or After Stay) Code 200*	*License Suspension Code 300*	*Other Regulatory Action Code 400*	*Total*
Alabama State Board of Medical Examiners	3	4	2	15	24
Alaska State Medical Board*	0	0	0	0	0
Arizona Board of Medical Examiners	9	10	3	54	76
Arizona Board of Osteopathic Examiners in Medicine and Surgery	2	10	2	25	39
Arkansas State Medical Board	3	1	5	18	27
California Board of Medical Quality Assurance	39	71	11	65	186
California Board of Osteopathic Examiners	0	1	0	0	1
Colorado State Board of Medical Examiners	0	7	7	9	23
Connecticut Medical Examining Board	0	4	0	0	4
Delaware Board of Medical Practice	0	1	0	0	1
District of Columbia Board of Medicine	8	0	0	1	9
Florida Board of Medical Examiners	13	34	8	77	132
Florida Board of Osteopathic Medical Examiners	2	8	0	11	21
Georgia Composite State Board of Medical Examiners	7	32	9	41	89
Hawaii Board of Medical Examiners	0	2	2	2	6
Idaho State Board of Medicine	1	3	1	7	12
Illinois Department of Registration and Education	9	14	21	31	75
Indiana Medical Licensing Board	9	9	21	13	52

ances—the courts could be counted upon to declare this absurd law unconstitutional. The Massachusetts State Medical Society of the American Medical Association appealed to the courts, and the legal process got underway. The case was heard by a Massachusetts judge—he considered himself an unprejudiced party despite the fact that he is a Medicare recipient. He proved his impartiality by ruling against the medical societies. It now is evident that the legislative, executive, and judicial branches of the government consider the physicians no better than second or third class citizens.

Act IV. What happens next? Obviously, the decision will be appealed—but what if the appeals are lost? Who will win? Simplistically, it would appear that the pressure groups for senior citizens in Massachusetts have scored a notable victory over the medical profession, and this is undoubtedly true. But will medical care for the elderly improve in Massachusetts? This seems doubtful, and several results of this legislation can be postulated. (1) Physicians in practice may cease to take on new patients with Medicare coverage. (2) Some physicians may decide to phase out patients with Medicare completely, even withdrawing from the management of elderly patients already under their care. (3) Some physicians may decide to retire from practice

Official Federation Summary of Formal Disciplinary Actions Reported for 1985

State Board	*License Revocation Code 100*	*Probation (Alone or After Stay) Code 200*	*License Suspension Code 300*	*Other Regulatory Action Code 400*	*Total*
Iowa State Board of Medical Examiners	1	17	2	7	27
Kansas State Board of Healing Arts	5	3	2	23	33
Kentucky State Board of Medical Licensure	8	16	4	4	32
Louisiana State Board of Medical Examiners	3	8	10	14	35
Maine Board of Registration in Medicine	4	0	0	3	7
Maryland State Board of Medical Examiners/ Commission on Medical Discipline	0	5	7	8	20
Massachusetts Board of Registration in Medicine	15	1	6	7	29
Michigan Board of Medicine	9	2	11	9	31
Michigan Board of Osteopathic Medicine and Surgery	1	1	1	4	7
Minnesota Board of Medical Examiners	2	16	1	11	30
Mississippi State Board of Medical Licensure	2	4	0	22	28
Missouri State Board of Registration for the Healing Arts	34	4	1	34	73
Montana Board of Medical Examiners	0	0	0	3	3
Nebraska State Board of Examiners in Medicine and Surgery	0	0	0	1	1
Nevada State Board of Medical Examiners	11	2	3	14	30
Nevada State Board of Osteopathic Medicine*	0	0	0	0	0
New Hampshire Board of Registration in Medicine	0	1	0	1	2
New Jersey State Board of Medical Examiners	17	28	31	70	146
New Mexico Board of Medical Examiners	2	0	0	6	8
New Mexico Board of Osteopathic Medical Examiners*	0	0	0	0	0
New York State Board for Medicine/Board for Professional Medical Conduct	42	14	4	15	75
North Carolina Board of Medical Examiners	11	6	0	13	30

Official Federation Summary of Formal Disciplinary Actions Reported for 1985

State Board	*License Revocation Code 100*	*Probation (Alone or After Stay) Code 200*	*License Suspension Code 300*	*Other Regulatory Action Code 400*	*Total*
North Dakota State Board of Medical Examiners	0	3	1	2	6
Ohio State Medical Board	22	7	10	28	67
Oklahoma State Board of Medical Examiners	5	16	2	17	40
Oklahoma State Board of Osteopathic Examiners	1	4	0	1	6
Oregon Board of Medical Examiners	2	23	0	26	51
Pennsylvania State Board of Medicine	27	21	9	32	89
Pennsylvania State Board of Osteopathic Medical Examiners	0	1	9	4	14
Rhode Island Board of Examiners in Medicine/Board of Medical Reviews	5	2	2	0	9
South Carolina State Board of Medical Examiners	5	8	4	6	23
South Dakota State Board of Medical and Osteopathic Examiners	0	1	0	0	1
Tennessee State Board of Medical Examiners	5	3	6	13	27
Tennessee State Board of Osteopathic Examiners*	0	0	0	0	0
Texas State Board of Medical Examiners	28	12	4	90	134
Utah Physicians Licensing Board	5	12	2	24	43
Vermont State Board of Medical Practice	1	0	0	0	1
Virginia State Board of Medicine	11	27	4	34	76
Washington Board of Medical Examiners/ Medical Disciplinary Board	5	8	6	27	46
Washington State Board of Osteopathic Medicine and Surgery	0	0	0	1	1
West Virginia Board of Medicine	3	4	0	5	12
West Virginia Board of Osteopathy*	0	0	0	0	0
Wisconsin Medical Examining Board	8	0	1	28	37
Wyoming State Board of Medical Examiners	1	0	0	0	1
Totals for year 1985	406	491	235	976	2108

*Boards reporting no disciplinary actions for 1985 earlier than they had anticipated. (4) Others may decide to move to greener pastures in other states. (5) Younger physicians entering practice well may find more attractive settings in other states. This may occur whether or not the new doctor will be treating Medicare patients at all because this legislation is indicative of an attitude towards doctors in the commonwealth. These possibilities were raised with an attorney in the state government when the law was under consideration. This individual sneered that this would be useful because there are too many doctors already!

Epilogue. These events have all the elements of a third-rate television soap opera except that they have such serious implications. There are at least four lessons to learn from this debacle. (1) When governments become involved in the delivery of medical care, the results can be disastrous for everyone concerned. It no longer is possible to believe that any proposed legislation is too silly to cause anxiety. (2) There are certain standards accepted by all state medical boards and all physicians as essential for licensure: high quality education in college and in medical school, one or more years of approved residency training, successful completion of an appropriate licensure examination, good moral character. When additional requirements are proposed, they must be scrutinized carefully and opposed unless they are appropriate. It is easy to visualize this new regulation as the tip of an extremely dangerous iceberg. (3) It is important to recognize that the state medical board is powerless in situations of this nature. The board members opposed this proposal vigorously, but the legislature and the governor paid no attention. Members of the board may resign in protest over unreasonable and unrealistic legislation. Unfortunately, this action does not change the law or its enforcement in any way. (4) This can happen anywhere. Massachusetts is blessed with outstanding colleges and medical schools, topflight residency programs, medical care of the highest quality, a progressive state medical society, and an active state medical board. If government can manipulate medical care in this fashion in Massachusetts, no physician anywhere in the United States is safe. (*Federation Bulletin* 73:281-283, 1986)

ADVANCES IN CANCER

In June 1986, one type of alpha interferon was approved by the Food and Drug Administration for clinical use in the treatment of hairy cell leukemia. While this is a rare form of malignancy and the clinical applications of this and other varieties of interferons remain limited at this time, approval of this substance was considered momentous.

Reasons for excitement surrounding this event pertain to the concept that the interferons represent a new family of noncytotoxic, natural products that have both antiviral and antineoplastic properties.

More than 20 years have passed since the interferons were discovered and during this time much has been learned regarding their origin and metabolic character. Fuller realization of their potential clinical application was promoted by the development of recombinant DNA technology that permitted production of sufficient quantities of the substance, otherwise existing in miniscule amounts, to allow clinical trials.

The interferons are further significant because their study provides great insight into the pathogenesis of malignant disease, thus affording new opportunities to treat these disorders more "physiologically" rather than depending on such basically "destructive" techniques as surgery, radiation, and chemotherapy.

Two New Jersey pharmaceutical firms, Hoffmann-La Roche, in Nutley, and Schering, in Union, have developed technologies to produce interferons in sufficient quantities to permit meaningful clinical trials and now are producing alpha interferon commercially for the treatment of hairy cell leukemia. It can be anticipated that further developments in the future will make these substances more applicable for a wider population of cancer patients.

The article by Dr. Pestka (page 51) provides us with a glimpse into the complex world of molecular genetics and how refined techniques in that field have led us to a fuller understanding of the structure and function of interferons.

Alan J. Lippman, M.D.

FINI

"Some people have astonishingly high thresholds of shame."

The Exchange Report

Initiated: Malpractice Reform

The Exchange has sponsored five major malpractice reform bills, which are now before the New Jersey legislature. Our goal is yours: to halt spiraling medical-care costs by cutting the number and size of malpractice awards. Before they ruin the economic and moral incentive to provide first-class medical care.

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LEGISLATIVE UPDATE

Status of Legislation on Which MSNJ Has Taken an Active Position

Bill	Subject	MSNJ Position	Committee	Present Status
S-100 Bubba	Requires physicians to personally present and obtain surgical consent forms and signatures. The form shall state the name of any assisting physician that performs surgery under the supervision of the attending.	Active Opposition	Senate: LIP	In committee
S-124 Bubba	Requires express written consent to surgery except in cases of physical or mental incapacity or emergencies. The State Board, after consultation with the Health Department, the Medical Society, and the Hospital Association shall prescribe the consent forms which shall be used by physicians.	Active Support	Senate: LIP	Passed in Senate; in Assembly Committee (HHR)
S-179 Brown	Requires the Department of Health to prepare a booklet on breast cancer which must be given to breast cancer patients by their physicians.	Active Opposition	Senate: IHW	Out of committee; 2nd reading
S-281 Dumont	Provides for a three-year statute of limitations, except for fraud, intentional concealment, or nontherapeutic or diagnostic purpose. Minors have until age 11 on any injury prior to age 8.	Active Support	Senate: JUD	In committee
S-345 Ewing	Creates a commission to advise the governor and the legislature regarding any proposals to regulate or license new professions.	Active Support	Senate: LIP	Out of committee; 2nd reading
S-403 Rand	Grants immunity to peer review organizations when the organization is recognized by the Department of Health. Also provides for confidentiality of materials and records of the PRO.	Active Opposition	Senate: IHW	In committee
S-440 Garibaldi	Provides that cancers caused by exposure to heat, cold, radiation, or a known carcinogen which manifest themselves in active police and firemen are assumed to be accidental and work-related disabilities.	Active Opposition	Senate: SGF&IR&VA	In committee
S-492 Garibaldi	Requires a second physician to be present at any termination of pregnancy procedure, if the attending has determined the unborn fetus is 24 weeks of age or older. The second physician is to provide immediate care to the child if it is born alive.	Active Opposition	Senate: IHW	In committee

Bill	Subject	MSNJ Position	Committee	Present Status
S-493 Garibaldi	Requires the State Board of Medical Examiners to conduct a study as to when fetal viability occurs so that the conduct of physicians may be governed accordingly. Having conducted such a study, the Board is to promulgate guidelines regarding the termination of pregnancy.	Active Opposition	Senate: IHW	In committee
S-539 Cardinale	Exempts the private practice of medicine from the certificate of need law.	Active Support	Senate: IHW	In committee
S-600 Bassano	Requires every physician attending a woman at the time of delivery, miscarriage, abortion, or during the prenatal period to perform an Rh test. If the test is Rh negative the physician shall, within 24 hours of receipt of the results, advise the woman of its significance and the availability of preventive treatment.	Active Opposition	Senate: IHW	Passed in Senate; in Assembly committee (HHR)
S-935 Feldman	Provides that within 60 days of filing an action against a physician the plaintiff must provide an affidavit from an expert that there has been a negligent deviation from the accepted standards of practice.	Active Support	Senate: JUD	In committee
S-937 Feldman	Authorizes courts to award reasonable attorney's fees to a party who has been subjected to a frivolous claim.	Active Support	Senate: JUD	Out of committee; 2nd reading
S-962 Feldman	Makes the decision of an Administrative Law Judge final in contested agency actions.	Active Support	Senate: JUD	In committee
S-1197 Jackman	Creates a separate licensing and regulatory board for chiropractic.	Active Opposition	Senate: LIP	In committee
S-1221 Codey	Removes the requirement that the State Commissioner of Health shall be a duly licensed physician.	Active Opposition	Senate: IHW	In committee
S-1241 Codey	Amends the certificate of need to include physicians whenever a health service has been regionalized by regulation of the Department of Health. Regulation would terminate within three years, at which time, the Commissioner could readopt the regulation.	Active Opposition	Senate: IHW	In committee
S-1283 Hirkala	Extends confidentiality to data in the possession of hospital peer review committee.	Active Support	Senate: IHW	In committee
S-1309 Contillo	Provides for a nonbinding referendum concerning the enactment of a national health plan.	Active Opposition	Senate: IHW	In committee
S-1583 Lesniak	Provides that physicians shall not be exempted from malpractice claims by fellow employees.	Active Opposition	Senate: LIP	In committee

Bill	Subject	MSNJ Position	Committee	Present Status
S-1841 Dalton	Provides that collateral sources of payment shall be used to offset damages. Further provides that periodic payments may be used at the request of either party if the future damages exceed $100,000.	Active Support	Senate: JUD	In committee
S-1878 Cardinale	Limits noneconomic damage awards to $100,000.	Active Support	Senate: JUD	In committee
S-1979 McManimon	Eliminates the requirement that prescriber's address and registry number be included on the prescription label.	Active Support	Senate: IHW	Signed into law as c.75 P.L. 1986
S-2041 McManimon	Establishes local area health planning agencies to continue the program being terminated by federal government. Funds will be provided by the state with an offset for any federal money that may be received.	Active Opposition	Senate: IHW	In committee
S-2012 McNamara	Establishes a demonstration project to allow hospitals to designate surplus acute beds as swing beds for skilled nursing care.	Active Support	Senate: IHW	In committee
S-2129 Russo	Prohibits physicians from employing physical therapists, owning a physical therapy practice, or any interest in a physical therapy practice.	Active Opposition	Senate: IHW	In committee
S-2187 Brown	Allows a licensed professional registered nurse to serve as the New Jersey Commissioner of Health.	Active Opposition	Senate: IHW	In committee
S-2261 Lynch	Permits optometrists to use drugs for treatment and diagnostic purposes.	Active Opposition	Senate: IHW	Out of committee; 2nd reading
S-2290 Bassano	Makes AIDS a reportable disease. Grants immunity to physicians who deem it advisable to inform sexual partners of patient's condition.	Active Support	Senate: JUD	In committee
SR-5 Bubba	Requests Congress to reject any proposals to tax health benefit packages.	Active Support	Senate: SG&IR&VA	In committee
A-137 Muhler	Creates a 27-person Board within the Department of Human Services vested with the authority to release or continue the commitment of persons who were found incapable of standing trial or not guilty by reasons of insanity. A Superior Court judge currently makes these decisions.	Active Opposition	Assembly: HHR	In committee
A-181 Villane	This bill would establish and license two categories of social workers and would create a Board of Social Work Examiners in the Department of Law and Public Safety whose powers and duties, among others, would be to administer the act, examine and license candidates for the various categories of social work, and	Active Opposition	Assembly: HERP	In committee

Bill	Subject	MSNJ Position	Committee	Present Status
	promulgate rules and regulations necessary for the effective enforcement of the act. The two categories of licensed social work would be 1) social work specialists, who would be required to have a doctorate in social work or a master's degree from an accredited school of social work and 2) social workers who would need a baccalaureate degree from an accredited college or university social work or social welfare program. The bill would "grandfather" in all persons currently in practice, provided they have been in practice in one of the two licensed categories for two of the last five years and apply to be licensed within 180 days from the effective date of act.			
A-200 Kosco	Creates a Commission to study the certificate of need process. The Commission would consist of 15 members. Two of the 15 would be physicians. Their report is to be submitted to the legislature and the governor.	Active Support	Assembly: HHR	In committee
A-360 Garvin	Requires the Department of Health and the State Board of Medical Examiners to prepare a booklet on all aspects of the treatment of breast cancer. Attending physicians are required to distribute the book to appropriate patients and to discuss it with them.	Active Opposition	Assembly: HHR	In committee
A-478 Muziani	Directs the State Board of Medical Examiners to review the issue of when fetal viability occurs and to provide guidelines to physicians regarding procedures to terminate pregnancy.	Active Opposition	Assembly: HHR	In committee
A-479 Muziani	Requires a second physician to be present whenever a physician terminates a pregnancy involving a live fetus of 24 weeks of age or older.	Active Opposition	Assembly: HHR	In committee
A-482 Muziani	Requires a physician to advise pregnant patients of the effects of alcohol and certain drugs on a fetus. The woman shall sign a form confirming the advice was given. The physician is to retain the original and provide the patient with a copy.	Active Opposition	Assembly: HHR	In committee
A-716 Miller	Allows patients or insurers to appeal excessive charges under the DRG program.	Active Support	Assembly: HHR	In committee
A-718 Miller	Terminates the DRG program and requires the Department of Health to develop an alternate system within one year.	Active Support	Assembly: HHR	In committee

Bill	Subject	MSNJ Position	Committee	Present Status
A-737 Miller	Provides that collateral sources of payment shall be used to offset damages. Further provides structured payments may be used at the request of either party if the future damages exceed $100,000.	Active Support	Assembly: JUD	In committee
A-738 Miller	Provides a $100,000 cap on damages for pain and suffering to personal injury actions.	Active Support	Assembly: JUD	In committee
A-739 Miller	Establishes a 3-year statute of limitations in tort actions against health care providers. Children would have until 11 to bring an action for injuries prior to age 8. After age 8 they come under the 3-year standard. Fraud, concealment, and unintentional foreign bodies "toll" the statute.	Active Support	Assembly: JUD	In committee
A-740 Miller	Provides that within 60 days of filing a medical malpractice complaint, the plaintiff must supply an affidavit, by a qualified expert, that reasonable cause exists to believe malpractice occurred.	Active Support	Assembly: JUD	In committee
A-776 Weidel	Provides that terminally ill patients may direct their physicians, through a written document to withhold or withdraw mechanical or artificial means to sustain or supplant vital function when those acts will only artificially prolong death. The directive shall comply with statutory form. The physician relying upon it shall determine it complies with the statute.	Active Opposition	Assembly: JUD	Out of committee; 2nd reading
A-947 Schuber	Transfers the Office of Administrative Law from the Executive Branch to the Judicial Branch. The initial decision made by the agency directly or by report from an administrative law judge. All appeals would then be heard by another administrative law judge. The next appeal would be to the Appellate Division.	Active Support	Assembly: JUD	In committee
A-998 Doria	Creates a commision to review licensing legislation being proposed by any legislator. The commission is to file a report with the governor and the legislature on the necessity of establishing the licensing mechanism being reviewed.	Active Support	Assembly: HERP	Passed in Assembly; in Senate RFA Committee;
A-1008 Doria	Creates a licensing board for chiropractic. Transfers all functions and responsibilities of the SBME regarding chiropractic to the new board. Removes the place for a chiropractor from the medical board.	Active Opposition	Assembly: HERP	In committee
A-2379	Establishes local area health planning agencies to continue	Active Opposition	Assembly: HHR	In committee

TORT REFORM: The Senate Judiciary Committee has before it four bills that would promote a viable insurance market in New Jersey. The Society has contacted all members of the Judiciary Committee and asked for a positive action on the following:

S-2395—Provides for a specific statute of limitations in medical malpractice personal injury actions.

S-2706—Provides for structured verdicts where the amount of future damages in certain civil actions exceeds $200,000.

S-2707—Establishes a $500,000 maximum award for noneconomic damages except in cases involving serious injuries, increases judicial discretion with regard to the modification of jury awards.

S-2805—Establishes standards for product liability and punitive damages in personal injury actions.

Bill	Subject	MSNJ Position	Committee	Present Status
	the program being terminated by the federal government. Funds will be provided by the state with an offset for any federal money.			
A-2400 Loveys	Establishes a three-tier monetary cap on award for pain and suffering. The caps are $5,000 for minor injury, $300,000 for major injuries, and $100,000 for all others. The bill also places limits on overall liability of public entities.	Active Support	Assembly: Insurance Committee	Passed in Assembly; in Senate JUD Committee
A-2401 Weidel	Eliminates joint and several liability and establishes the collateral source rule so that plaintiffs cannot collect more than once for the same loss. Also, establishes that state-of-the-art, adequate warning and open and obvious defenses for product liability. Provides that 95 percent of punitive damages will be paid to the state, rather than the plaintiff. Establishes a fund to pay excess awards levied against public entites.	Active Support	Assembly Insurance Committee	Passed in Assembly; in Senate JUD Committee
A-2402 Zecker	Requires structured settlements for awards in excess of $300,000.	Active Support	Assembly Insurance Committee	Passed in Assembly; in Senate JUD Committee
A-2403 Kelly	Requires arbitration of all claims below $20,000.	Active Support	Assembly Insurance Committee	Passed in Assembly; in Senate JUD Committee
A-2404 Rafferty	Requires insurance companies to provide the Insurance Department with specific data to support their rate request.	Active Support	Assembly Insurance Committee	Out of committee; 2nd reading
A-2511 Doyle and Karcher	Requires health care providers to accept Medicare assignment.	Active Opposition	Assembly: HHR	In committee
A-2535 Kelly	Authorizes nurses to prescribe medications.	Active Opposition	Assembly: HERP	In committee

Senate Reference Committees
LIP: Labor, Industry, and Professions
SGF&IR&VA: State Government, Federal & Interstate Relations & Veterans Affairs
IHW: Institutions, Health & Welfare
JUD: Judiciary
RFA: Revenue, Finance & Appropriation

Assembly Reference Committees
HHR: Health and Human Resources
HERP: Higher Education and Regulated Professions
JUD: Judiciary
SG: State Government

WHOM TO CALL AT MSNJ HEADQUARTERS

Executive Director: Vincent A. Maressa

Address changes	Peggy Smith
Advertising (in NEW JERSEY MEDICINE)	Joseph Cookson
AMA Delegation	Diana C. Gore
Annual Meeting	Eileen Pfeiffer
Auxiliary, MSNJ	Margaret Fransckiewich
Biomedical Ethics	June O'Hare
Blue Cross/Blue Shield	Joseph C. Lucci
Board of Trustees	Diana C. Gore
Continuing Medical Education	Martin E. Johnson
Council and Committee Appointments	Diana C. Gore
Credentials	Mary Hamer
Delegates, MSNJ	Eileen M. Pfeiffer
DRG	Vincent A. Maressa
Dues Payments: MSNJ and AMA	Mary Hamer
Eye Health Screening Program	Patricia Hackett
Executive Committee	Diana C. Gore
Financial Operations	Arthur White
HMOs/IPAs/PPOs	Joseph C. Lucci
Hospital Medical Staff Relations	Diana C. Gore
House of Delegates	Diana C. Gore
Impaired Physicians Program	David I. Canavan, M.D. Linda A. Pleva Edward G. Reading
JEMPAC	June O'Hare A. Ronald Rouse
Judicial Council	June O'Hare
Legal Services Plan	Joseph C. Lucci
Legal Questions	Vincent A. Maressa
Legislation	June O'Hare
Liaison Representatives to other organizations	Diana C. Gore
Long-Range Planning Committee	Vincent A. Maressa
Loss Prevention, Risk Management	A. Ronald Rouse
Maternal and Newborn Record Books	Joyce Guest
Medical Assistants	Joseph C. Lucci
Medical Education	Martin E. Johnson
Medical Services	Joseph C. Lucci
Medical Student Loan Fund	Patricia Drakeford
Medicare/Medicaid	Joseph C. Lucci
Membership Benefits	Joseph C. Lucci
Membership Directory	Joyce Guest Arthur White
Membership Records	Mary Hamer
Mental Health	Joseph C. Lucci
NEW JERSEY MEDICINE	Geraldine Hutner
Nominating Committee	Diana C. Gore
Officers of MSNJ	Diana C. Gore
Peer Review Organization	Vincent A. Maressa
Professional Liability Insurance	A. Ronald Rouse
Public Health	Joseph C. Lucci
Public Relations	Martin E. Johnson
Resident Association	A. Ronald Rouse
Resolutions for Annual Meeting	Diana C. Gore
Senior Citizen Projects	Diana C. Gore
Special Projects	A. Ronald Rouse
Specialty Societies	Patricia Hackett
Student Association	A. Ronald Rouse
Subscriptions	Dorothy Griffith
Third-Party Payor Complaints	Joseph C. Lucci
Widows and Orphans Program	Joyce Guest
Women Membership	Martin E. Johnson

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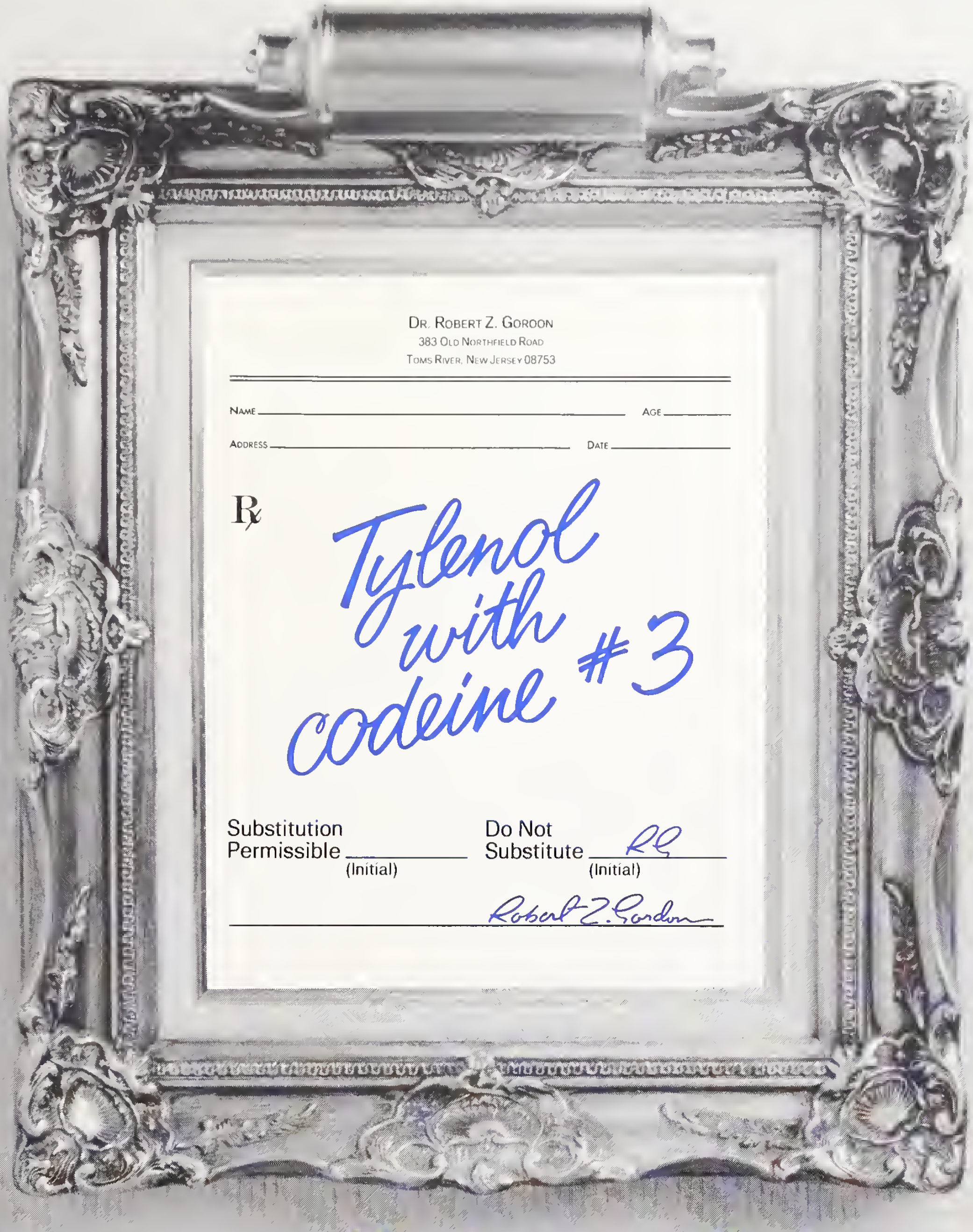

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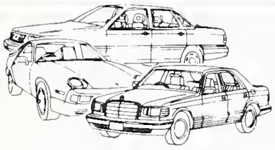

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PROFESSIONAL LIABILITY COMMENTARY*

Physicians' Instructions and Records

Malpractice Avoidance; Award in Polio Case; Money Spent on Resolving Disputes; Breast Cancer Patient Award; Did You Know?

RULES FOR MALPRACTICE AVOIDANCE

There are general principles of risk management that apply to all areas of medical practice. Physicians are well advised to remember the "4 C's" of malpractice avoidance: compassion, communication, competence, and charting.

Compassion. Physicians who demonstrate a deep concern for their patients often are able to avoid litigation, even when a poor outcome occurs. The one element necessary for every lawsuit is a dissatisfied patient. Patients find it difficult to sue a physician whom they like and who they believe cares about them.

Communication. Informed consent can provide the cornerstone of effective doctor-patient communications. By educating the patient as to options, likely outcomes, and significant risks of each option, the physician fosters more realistic patient expectations. This especially is true in obstetrics where every family hopes for, and usually expects, a perfect outcome. The obstetrician who shares with the family some of the uncertainty and risk inherent in pregnancy and childbirth will be less likely to receive all of the blame should a suboptimal result occur. Obstetricians who spend more time with their patients per office visit incur fewer claims. It is imperative that caution be exercised when attempting to manage a patient by telephone. Whenever you are in doubt, insist that the patient be seen. Another critical area of communication in obstetrics involves intraprofessional communications. Work with your labor and delivery nursing staff to ensure that nursing skills are adequate for your facility. Request that nurses read back orders that you have telephoned. Develop a method of regularly informing other physicians who may cover your practice of your obstetrical patients, particularly those at high risk and near term. Develop a data base for each patient that can accompany her to the hospital and help to facilitate a rapid review of her prenatal history and risk factors.

Competence. Practice within the scope of your competence. When confronted by a situation that is beyond your training and experience, get help. If consultation or referral to another facility is not possible, then perform to the best of your abilities and carefully document your actions and the reasons that consultation or referral was not possible.

Charting. Defense attorneys estimate that between one-third and one-half of malpractice cases are lost because the medical record was inadequate. In other words, the doctor may have done "the right thing" but lost the case because the record did not substantiate his or her correct actions. The hospital and office record should be viewed as the physician's ally when, usually years later, it is asked to serve as the principal witness to the doctor's actions long after human memories have faded. Records must be legible, timely, complete, and accurate. When the patient is advised as to the benefits or risks of a particular procedure, be certain that the record reflects that discussion. If she refuses the procedure and understands the potential consequences of such refusal, document that as well. Resist the temptation to alter or amend records. It is wiser to do any additional explaining through the use of an addendum that includes the reasons for the subsequent inclusion of an addendum. The merest hint of record tampering spells legal disaster for the defendant-doctor. *(Family Physicians and Obstetrical Malpractice)*

$3.2 MILLION AWARDED IN CONTACT POLIO CASE

In a New York case a plaintiff, a 43-year-old architect, who had never been vaccinated against polio, had close contact with his granddaughter during the weeks following her vaccination with the Sabin polio vaccine. Several months later, the plaintiff contracted polio resulting in his being paralyzed from the waist down. The plaintiff contended that the defendant's instructions to physicians in the package insert and the *Physician's Desk Reference* were inadequate in warning of the risk of vaccine-induced paralytic poliomyelitis in adults who had no previous polio vaccination. The plaintiff claimed a loss of income because of his inability to manage his small construction company. Another case similar to this resulted in a one million dollar settlement. (*Personal Injury Newsletter* 30:9, Oct. 20, 1986)

$15-20 BILLION TO RESOLVE DISPUTES

A report prepared by Andrew Schotter and Janusz Ordover of the C.V. Starr Center at New York University (March 1986) indicates between 19.7 percent and 26 percent of all premiums earned, or $15 to $20 billion, was spent by plaintiffs and defendants to resolve disputes arising from negligence in 1984. It was estimated that between 25 and 34 cents out of every dollar paid in awards and settlements was paid to administer the tort system. If current rates of growth continue, it is expected that by 1990 between $31 and $38 billion per year will be spent administering the system.

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*This column, from the Department of Professional Liability Control, MSNJ, was prepared by James E. George, M.D., J.D., and A. Ronald Rouse, who are, respectively, Director of the Department and Director of Special Projects.

The authors indicate that their estimates do not carry any policy prescriptions with them. A switch to a different system of tort liability is a decision that should be made by comparing the net benefits of the current system to a proposed alternative. However, the estimates suggest that alternatives be considered because they indicate that administrative costs are very high. A system with lower administrative costs, even if it provided less incentive for accident avoidance, might be more beneficial.

The administrative cost estimates were derived using four different methodologies and four different assumptions within each method. Sixteen estimates were calculated which yielded the $15 to $20 billion cost range. The 16 estimates were largely consistent indicating that the range estimate was reliable. Two of the four methods relied heavily upon the allocated and unallocated loss adjustment expense data furnished from A.M. Best's aggregates and averages, while the other two relied heavily upon court case load statistics. (*Professional Liability Update*, AMA, September 1986)

$2,099,500 AWARDED TO BREAST CANCER PATIENT

A trial court properly refused to give an instruction in contributory negligence in a malpractice suit alleging late diagnosis of breast cancer, an Illinois appellate court ruled.

A 22-year-old woman consulted a gynecologist for a premarital examination. Three months later, in February 1979, she returned, complaining of pain and a lump in her left breast. The gynecologist diagnosed a normal thickening. Her records did not contain the complaint of pain. The patient allegedly complained of a lump and pain on a visit in July 1979, but the gynecologist's records again did not show such complaint.

Records of a January 1980 visit included the words "probable fibrocystic." The gynecologist referred the patient to a surgeon for a second opinion. The surgeon found that the left breast was 25 percent larger, with prominent veins. No mammogram was ever ordered. In May 1980, the gynecologist found irregularities leading to a suspicion of malignancy. The surgeon performed a needle biopsy, which detected cancer. On the next day, he performed a surgical biopsy. A report on examination of a frozen tissue sample indicated no malignancy. The surgeon informed the patient that a node he had felt was not cancerous and that a mastectomy would be performed. This was done without a report on a permanent section of tissue, which indicated cancer. The patient was given radiation and chemotherapy and had further surgery by other physicians later.

The patient sued the gynecologist, the surgeon, and pathologists for malpractice. At the trial, her expert testified that the cancer could have been detected by mammography one and a half years earlier and that in February 1979, her chances of cure would have been 95 percent. The patient settled with the surgeon for $900,000 and with the pathologists for $500. The jury found the gynecologist liable, entering judgment for $2,099,500.

On appeal, the gynecologist contended, among other things, that the trial court had erroneously failed to instruct the jury on contributory negligence because of the patient's delay in notifying the physicians of a physical change in her breast in April 1980. She contended that any delay in diagnosis caused by the patient raised a serious issue of contributory negligence.

The court pointed out that expert testimony had established that breast cancer grows in five stages, with a specific percent of curability in each stage. In the absence of evidence as to the stage of the patient's cancer in April or May 1980, there was no basis on which to postulate contributory negligence in failing to see the physician in April rather than May 1980. The court affirmed the lower court's judgment. (*The Citation* 53:11, September 15, 1986)

DID YOU KNOW . . .

When the Los Angeles County Medical Association announced plans to sponsor a computer service that helps identify potentially litigious patients, local trial lawyers offered to inform patients how often their doctors had been sued? Now, citing lack of physician interest, the Medical Society has pulled the plug on its hot line. But the trial lawyers' service, which is free of charge, is continuing. So many calls have come in that extra personnel have been hired to handle the load. (*Medical Economics*, October 20, 1986)

A physician won a malicious prosecution suit against a California lawyer who filed a suit with no basis in fact? A Santa Cruz anesthesiologist won $8,000 in general damages and $40,000 in punitive damages from an attorney who said he filed six days before the statute of limitations ran out "merely to protect (the patient's) rights." The patient dropped the suit; the physician countersued. (*Medical Liability Monitor* 11:10, October 23, 1986)

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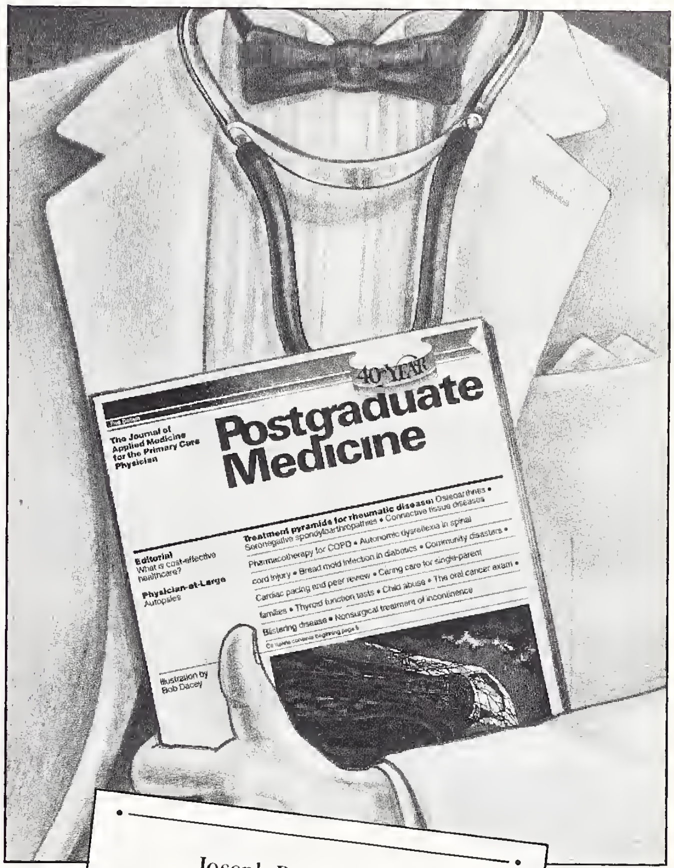
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TREATING STAGE FRIGHT IN MUSICIANS: THE USE OF

BETA BLOCKERS

Paul M. Lehrer, ph.d., Raymond C. Rosen, ph.d., John B. Kostis, m.d.,
Daniel Greenfield, m.d., m.p.h., Piscataway*

Stage fright is a widespread problem among musicians and other performing artists. Although stage fright has been said to augment the quality of performance under some circumstances, its effects usually are experienced as deleterious, and even may be quite debilitating.[1] Musicians tend to be particularly concerned about the physiological manifestations of anxiety, which not only detract from the pleasure of performance, but also can interfere seriously with the playing of an instrument. Musical performance requires a degree of motor skill, coordination, and control that resides at the outer limits of human ability. Therefore, it is not surprising that the various somatic and psychological effects of the "fight-flight" reflex easily can impair the ability to perform. For example, muscle tremor and elevated isometric muscle tension can hinder arm and finger dexterity; and various manifestations of sympathetic autonomic activation, such as cold clammy hands, palmar sweating, and dry mouth, can adversely affect performance on a variety of instruments.

Experimental treatment strategies increasingly have focused on the use of medications that target the physiological symptoms of stage fright. Performers generally shun most of the commonly prescribed tranquilizers, e.g. diazepam, because the central effects associated with these drugs tend to reduce mental alertness and thereby diminish both the precision and the intensity of a performance. Considerable attention has focused upon the beta-adrenoceptor blocking drugs due to their potential for reducing peripheral sympathetic arousal without pronounced central effects.

Although the extent of beta blocker usage among musicians has not been assessed systematically, the authors' own informal survey of performers and physicians involved in the treatment of stage fright suggests that it is becoming more common. Some orchestra musicians report that they use beta blockers at every performance—often several times per week. Furthermore, it is not uncommon for performers to ingest this medication without medical supervision—often acquiring it from acquaintances, music teachers, or coaches.

This review assesses the implications for medical practice of the use of beta blockers by performing musicians. It also evaluates the extent of current knowledge about the effects of beta blockers on stage fright, and will outline the important factors to be studied concerning the possible advantages and disadvantages of beta blockers in this context.

EFFECTS OF BETA BLOCKERS ON ANXIETY

The role of the sympathetic nervous system in the mediation of anxiety has been recognized since the work of Cannon.[2] It is not surprising, therefore, that numerous studies have investigated the possible role of beta blockers in managing the symptoms of anxiety in both "normal" individuals and clinically anxious patients.[3,4] Since the first controlled study comparing the effects of propranolol and placebo in a group of anxious outpatients,[5] clinical research has shown a significant, albeit limited, role for beta blockers in this regard. Specifically, it appears that for those patients whose primary complaints are somatic, e.g. palpitations, hyperventilation, tremor, nausea, beta blockers can be moderately effective. On the other hand, patients who experience free-floating or "psychic" anxiety, social fears, low self-esteem, or sexual anxiety, appear to show little or no benefit from treatment with beta blockers.[6] The positive results reported for somatic aspects of anxiety most likely are due to the autonomic effects of the drugs, as beta blockers with minimal central nervous penetration, e.g. practolol, have been shown to achieve similar results.

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*From UMDNJ-Robert Wood Johnson Medical School. Correspondence may be addressed to Dr. Lehrer, Dept. of Psychiatry, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ 08854.

Several studies have compared the antianxiety properties of beta blockers with more conventional psychotropic agents, such as the benzodiazepines. Although these studies have indicated that beta blockers such as propranolol generally are less effective than diazepam in the management of clinical anxiety, Hayes and Schulz[4] have recommended that beta blockers be considered for the management of anxiety disorders accompanied by particular physical symptoms, especially cardiovascular complaints. These authors further suggest that beta blockers may be useful for some patients who have failed to respond to treatment with benzodiazepines. Beta blockers have the distinct advantage of causing fewer difficulties with mental alertness and cognitive functioning, but have yet to be approved by the Federal Drug Administration for use in the treatment of anxiety. Noyes et al.[8] have found propranolol to be much less effective than diazepam in the treatment of panic disorders, but some evidence has been found for the usefulness of this drug in combination with alprazolam[9] or imipramine[10] in the treatment of panic.

MEDICAL PRECAUTIONS AND CONTRAINDICATIONS

Beta blockers generally are well tolerated by most patients. In addition, since they have been used for over 20 years in millions of patient-years of treatment, it is very likely that the full spectrum of adverse and toxic reactions already has been described. However, although beta blockers are well tolerated and safe, their use is sometimes associated with adverse reactions. These may be classified as common (those occurring in over 10 percent of the patients) and uncommon (those that might occur in about 1 to 2 percent of patients). A list of the major adverse physiological reactions, modified from Kostis and DeFelice, is presented in Table 1.[11]

Bradycardia may occur in response to some beta blockers. However, it usually is of no clinical consequence in otherwise healthy individuals. When marked or symptomatic, it can be alleviated easily by adjustment of dose.

Hypotension may result from sinus bradycardia, depression of myocardial function, and the interaction with other drugs such as diuretics. This effect usually is not troublesome and only a rare patient, usually someone with poor left ventricular function, is unable to tolerate beta blockers because of hypotension. Fortunately, unlike other classes of antihypertensive agents, beta blockers do not produce significant postural hypotension. One exception to this is labetalol, which also possesses alpha-1 blocking activity.

On occasion, congestive heart failure, acute pulmonary edema, or a clinical picture resembling cardiogenic shock may be seen in patients with markedly impaired left ventricular function. Patients with mild left ventricular dysfunction usually are able to tolerate beta blockers, in some instances in conjunction with digitalis and diuretics. Congestive heart failure is less likely to be precipitated by beta blockers possessing intrinsic sympathomimetic activity (ISA) such as pindolol, although well-controlled trials on this are not available. Nevertheless, when there is marked left ventricular dysfunction and the circulatory system

TABLE 1—Adverse Effects of Beta Blockers

Common	Uncommon	Uncommon
Bradycardia	Bronchospasm	Hypotension
Cold extremities	Carcinogenicity*	Memory disturbances
Dizziness	Claudication	Muscle cramps
Vivid dreams	Depression	Oculomucocutaneous syndrome*
Gastrointestinal complaints	Hallucinations*	
Insomnia/sleep disturbances	Heart block	Paresthesias*
		Postural hypotension†
Muscle fatigue	Heart failure	Pruritus
Sexual dysfunction	Headaches	Rash
Weight gain	Hematologic disorders	Raynaud's syndrome
Withdrawal phenomena	Hypoglycemia	Sclerosing peritonitis*

*Rare; †Common with labetalol, uncommon with other beta blockers is dependent on active sympathetic tone for adequate function, all beta blockers are dangerous and should be avoided.

A similar cautionary note is in order for patients with bronchial asthma or a tendency to bronchospasm. Although cardioselective beta blockers and beta blockers possessing ISA produce less tendency to bronchospasm, all beta blockers should be avoided in patients with asthma.

Cold extremities are additional side effects of beta blockers that may occur in many patients, especially the elderly. This may have adverse effects on music performance on instruments requiring finger dexterity. In addition, patients with peripheral vascular disease or Raynaud's phenomenon may report aggravation of their symptomatology when treated with beta blockers. This may be attributed to decreased cardiac output in some patients or a blockade of the vasodilator beta-2 receptors by nonselective beta blockers. In such circumstances, vasoconstriction may occur, mediated by unopposed alpha sympathetic activity. Agents with beta-1 selectivity or beta-2 partial agonist activity, or those having direct vasodilator effect such as labetalol, should be tolerated better by individuals with these problems.

Beta blockers should be used with caution in patients with diabetes. Hypoglycemic reactions have been reported and have been attributed to blockade of beta-2 mediated glucagon release. In addition, the sympathetic manifestations of hypoglycemia, e.g. tachycardia, may be masked by beta blockers. Fortunately, the cholinergic effects, e.g. sweating, are not masked by beta blockers. In general, patients on oral hypoglycemic agents or insulin should be cautioned that a hypoglycemic reaction may be masked partially by beta blockers.

Chronic administration of beta blockers results in unfavorable alterations of carbohydrate and lipid metabolism. A modest elevation of plasma triglycerides and a decrease in high-density lipoprotein cholesterol have been reported with beta blockers, especially nonselective, non-ISA beta blockers. The ISA beta blocker, pindolol, does not appear to affect the lipids adversely. Similarly beta-1 selective beta blockers appear to produce such effects to a smaller degree than nonselective beta blockers. Although the significance of high triglycerides in the causation of coronary artery disease has not been agreed upon, there is strong evidence that low HDL cholesterol is associated with increased risk of coronary artery disease. Therefore, frequent long-term use of beta blockers should be considered in this light.

Abrupt discontinuation of beta blockers may result in a state of increased sympathetic arousal. This, in part, may be due to upregulation of beta receptors during chronic beta blocker therapy. Although the average healthy person or the person with hypertension is not adversely affected by this, patients with severe coronary artery disease and precarious control may suffer adverse effects including aggravation of angina, myocardial infarction, and serious arrhythmias. This hyperadrenoreceptor state might have adverse effects on musical performance. It appears that ISA beta blockers do not upregulate the beta receptor, so abrupt withdrawal from them should not be expected to produce these effects.

Gastrointestinal complaints are reported by patients receiving beta blockers. They may be ameliorated by changing the agent or the time of ingestion. Weight gain also is reported.

Oculomucocutaneous syndrome and sclerosing peritonitis have been reported mainly with practolol and do not appear to be generic to beta blockers. However, physicians should be aware of the possibility of the

TABLE 2—Drug Interactions with Beta Blockers[12, 13]

Drug	Potential Interaction Effect
Aluminum hydroxide gel	Decreased beta blocker absorption and effect
Aminophylline	Mutual inhibition
Antidiabetic agents	Enhanced hypoglycemic hypertension; masking of some hypoglycemic symptoms
Calcium channel blockers	Potentiation of bradycardia, myocardial depression, and hypotension
Cimetidine	Prolonged half-life of beta blocker
Clonidine	Hypertension during withdrawal
Digitalis glycosides	Potentiation of bradycardia
Ergot alkaloids	Excessive vasoconstriction
Glucagon	Inhibition of the hyperglycemic effect
Halofenate	Reduced beta-blocking activity; produces withdrawal rebound syndrome
Indomethacin	Inhibition of antihypertensive responses to beta blockade
Isoproterenol	Mutual inhibition
Levodopa	Antagonism of levodopa's hypotensive and positive inotropic effects
Lidocaine	Beta blocker pretreatment increases lidocaine blood levels and potential toxicity
Methyldopa	Hypertension during stress
Phenothiazines	Additive hypotensive effects
Phenylpropanolamine	Severe hypertensive reaction
Phenytoin	Additive cardiac depressant effects
Quinidine	Additive cardiac depressant effects
Reserpine	Excessive sympathetic blockade
Tricyclic antidepressants	Inhibition of negative inotropic and chronotropic effects of beta blockers

occurrence of these syndromes.

Physicians prescribing beta blockers should be aware not only of the side effects and strategies for minimizing them, as described above, but also of drug interactions. Care should be taken in prescribing beta blockers to musicians who currently are taking other forms of medication. Among the many reported drug interactions of beta blockers that have been summarized elsewhere,[11] only several are mentioned here. These have been selected because of the frequency of the administration of the other drug and the clinical importance of the interaction (Table 2).

Interactions with anesthetics pose a potential clinical problem; in some circumstances, these may be contraindications to the use of beta blockers, except those with partial agonist activity. Precautions should be taken by individuals taking beta blockers so that, if emergency surgery is needed, the anesthesiologist will know that beta blockers are being taken. Also, calcium channel blockers, especially verapamil, may potentiate bradycardia, myocardial depression, and hypotension induced by beta blockers. Excessive hypotension may be seen in patients on other antihypertensive agents.

Beta blockers are used by musicians usually only prior to performance, and performances may be relatively infrequent. Therefore, the total spectrum of side effects that has been observed after chronic use may not be manifest in subjects receiving beta blockers for this condition. On the other hand, several of the side effects described, such as precipitation of heart failure, bradycardia, and asthmatic attack, may be seen even with one dose. It is prudent, therefore, for the physician to be aware of the complete spectrum of side effects of beta blockers and drug interactions as well as strategies for avoiding these. Also, some musicians with particularly active performance schedules who ingest beta blockers regularly might be expected to experience one or more of the side effects experienced by other chronic users of these drugs.

PSYCHOLOGICAL AND BEHAVIORAL SIDE EFFECTS OF BETA BLOCKERS

There has been increasing concern in recent years with the possible adverse effects of beta blockers on various aspects of psychological functioning. In the first study of this type, Waal reported that two patients committed suicide during the course of treatment with propranolol and that an additional ten patients showed signs of serious depression while on the drug.[14] Although this study has been criticized for the lack of experimental controls and the confounding of drug effects (patients were taking various other antihypertensive drugs during the course of treatment), subsequent case reports have confirmed that severe depression is associated with propranolol treatment.[15,16] One study found that tricyclic antidepressants are prescribed more frequently in conjunction with beta blockers for management of such problems.[17]

Patients' reports of lethargy, muscle fatigue, tiredness, and related symptoms also are commonly associated with administration of beta blockers. For example, in the largest clinical trial to date of hypertension management with beta blockers,[18] the complaint of lethargy was the reason most often cited for stopping propranolol administration. Despite the prevalence of these complaints, however, the underlying mechanisms involved are poorly understood. Specifically, it is unclear to what extent such symptoms are centrally or peripherally mediated, particularly given the evidence of significant impairment in exercise performance associated with beta blocker administration among subjects without angina.[19,20] Although beta-blocker-induced muscle fatigue might be expected to have deleterious effects on music performance, no such effects yet have been documented.

Regarding the effects of beta blockers on cognitive and perceptual motor performance, there is little consistency in the results of research to date. Although most studies of acute drug effects in normals have shown little or no effect on psychomotor performance,[21] at least one study of long-term propranolol use with hypertensives found evidence of significant impairment in verbal memory associated with drug administration.[22] It should be noted, however, that a number of methodological controls were lacking in this study, such as the inclusion of an untreated control group. Overall, it is interesting to note that in those few studies in which cognitive or psychomotor impairments have been observed, the experimental subjects, whether normals or hypertensives, generally are unaware of such changes in performance.

Changes in sleep quality and sexual function also are among the most commonly reported side effects of beta blockers. Although few controlled studies have directly examined these effects, at least one study with normal subjects[23] has found laboratory evidence to support the clinical reports of insomnia or intrasleep wakefulness that appear to be particularly prevalent with administration of the lipophilic beta blockers.[24] Clinical studies also have indicated significant, albeit infrequent, complaints of nightmares or vivid dreams, particularly with higher doses of propranolol. Finally, there is evidence that long-term beta blocker administration is associated with sexual dysfunction, including loss of sexual desire and erectile dysfunction.[25,26] Again, it appears that these symptoms are related to the dosage level of the drugs; as one review has noted occurrence of erectile dysfunction only at levels of propranolol administration in excess of 120 mg/day.[27] Many of these effects can be avoided by using hydrophilic beta blockers which readily do not penetrate the blood-brain barrier.

USE OF BETA BLOCKERS AND EVALUATION OF LITERATURE

The studies reviewed in Table 3 indicate that, with adequate medical screening and a preconcert trial, various beta blockers at a single musical performance can produce marked decreases in most physiological and some cognitive manifestations of stage fright, while simultaneously producing beneficial effects on several quantifiable dimensions of musical performance. These include intonation[29,30] and judges' ratings[29,32] of musicianship, evenness of vibrato, and playing fast passages and trills,[34] bow control,[29,31] dynamic control,[31] accuracy,[33] memory,[33] rhythm,[33] and tempo.[32]

Although comparisons across studies suggest a

TABLE 3—Effects of Beta Blockers on Performance

Drug	Dosage	Effects
Alprenolol[28]	50-100 mg	Decreased self-reports of anxiety and symptoms of sympathetic arousal among orchestral musicians deemed likely to evoke symptoms.
Oxprenolol[29]	40 mg	Decreased self-reports of nervousness, higher judges' ratings on five of seven ratings of musicianship and technique, and lower heart rate during a performance among volunteer conservatory students of stringed instruments not selected on the basis of performance anxiety.
Pindolol[30]	5 mg	Decreased self-ratings of anxiety and improved self-ratings of performance; decreased heart rate and systolic blood pressure among professional musicians during a performance. Improved judges' ratings of performance only for those subjects who were particularly strong players.
Nadolol[31]	40 mg	Improved judges' rating of bow control but no other effects on self or judges' ratings. Nonsignificant trend for intonation to be improved with nadolol but worsened with 2 mg diazepam; for rhythmic control to be lessened by both drugs, and for dynamics to be more monotonous with nadolol but more exciting with diazepam; decreased heart rate but not blood pressure among nonanxious conservatory stringed-instrument students during a performance.
Propranolol[32, 33]	40 mg	1. Fewer self-reported perceptions of sympathetic arousal, improved judges' ratings of accuracy, memory, rhythm, and tempo at a performance among keyboard students suffering from stage fright. Some subjects felt more unnerved and experienced memory slips and impaired concentration.[33] 2. Lower self-ratings of anxiety, improved judges' and self-ratings of performance quality, diminished heart rate, and salivary sodium, increased salivary potassium during performance among conservatory students not selected for anxiety. Increased self-ratings of anxiety were associated with the beta agonist terbutaline.
Atenolol[34]	100 mg	Improved regularity of playing during fast passages (determined by measuring time intervals between notes), decreased heart rate, and urine catecholamines, a nonsignificant tendency to decreased self-rated anxiety during a solo performance or performance examination among conservatory students of stringed instruments.

number of differences between the effects of various beta blockers on performance anxiety, these do not seem related to any known pharmacological characteristics of the drugs. Propranolol, a lipophilic beta blocker which is known to cross the blood-brain barrier and, therefore, to have direct central effects, appears to have smaller effects on self-reported anxiety than does atenolol, a hydrophilic beta blocker which presumably does not cross the blood-brain barrier. Similarly, atenolol, which is a cardioselective drug, appears to have greater effects on stage fright than nadolol, which is not cardioselective and, therefore, might be expected to have more general effects on sympathetic tone. Some of the inconsistencies in results may be due to the particular dosage levels or experimental procedures used in these studies. Comparative studies have not yet been done between various beta blockers with different ancillary properties. One comparative study did suggest that beta blockers may have fewer adverse side effects on performance than diazepam.[31]

Important other gaps remain in our understanding of the effects of beta blockers on stage fright. Only one study to date has been conducted on subjects who actually suffered from severe stage fright. In that study, important psychological and performance-related aspects of stage fright were not found to be positively affected by beta blockade.[33] Similarly, another study found significant improvements in performance quality after beta blockers among relatively strong players but not among weaker ones.[30] There is little direct and systematic evidence for the beneficial effects of beta blockers among those most in need of relief from debilitating performance anxiety.

Although various technical aspects of performance appear to be enhanced by beta blockers, none of the studies has examined the emotional intensity or excitement of the performances. All the musical ratings obtained in studies we reviewed are similar to those used at musical auditions and competitions; such procedures sometimes have been criticized for overemphasizing technical perfection at the expense of the more subjective emotional components, thus often giving highest ratings to technically proficient performers who later have difficulty establishing solo careers and holding audiences.[35] Performers sometimes feel that they must be "keyed up" to an optimal level in order to give an emotionally exciting and satisfying performance. It is not yet known whether beta blockers facilitate or inhibit this optimal psychophysiological state. However there are suggestions from the literature that beta blockers may diminish the excitement of a performance by interfering with rhythmic control and dampening of dynamic intensity.[31]

We have no knowledge of the effects of repeated use of beta blockers on stage fright or on performance quality. It is not known, for example, whether repeated administrations of beta blockers (as much as several times per week) will produce psychological dependence, habituation, or exacerbation of side effects.

Studies of longer-term use of beta blockers for performance anxiety are required. Individuals who frequently rely on beta blockers during a busy concert season may wish to withdraw abruptly from the medication at the end of the season. It is known that abrupt withdrawal may lead to potentially serious medical consequences.[44]

The comparative and the interactive effects of beta blockers and various psychological approaches, e.g. relaxation therapy, for management of stage fright have not been evaluated. The need for such evaluation is illustrated by reliable "order" effects in all of the studies reviewed in Table 3. Regardless of the order of drug versus placebo presentation, all studies have found a significant decrease in symptoms of stage fright from the first testing season to the second. These effects sometimes are considerably larger than the effects of the drug. Thus, at the very least, the repeated experience of performing for others may be an important therapeutic intervention. Indeed repeated exposure to the feared situation is a widely used psychological technique for the treatment of various fears.[36] Other techniques such as relaxation therapy, desensitization, hypnosis, biofeedback, and cognitive restructuring similarly have been found to produce therapeutic effects on stage fright.[37-42] It is known that long-term use of some psychotropic medication may interfere with the effectiveness of psychological interventions. This has been shown to occur in the case of diazepam and anxiety neurosis, where psychological dependence on the drug appears to render people unmotivated to attempt to control their anxiety by behavioral means. This possibility has not been evaluated in the case of beta blocker administration for stage fright.[43]

The influence of various side effects of beta blockers, e.g. fatigue, sleep difficulties, on performance, sense of well-being, and health have not been examined in this population. Some of the potential problems that might arise have been discussed. One of the known side effects of beta blockers—memory impairment—was found in one study to have been a problem for some musicians who used the medication in a single concert, although the average beta blocker effects (across subjects) produced improvement in memory.[33] Despite the fact that physicians who prescribe the drugs regularly have not described any consistent problems with side effects, the effects on performance may be quite subtle—too subtle for the performer to notice but, perhaps, quite noticeable to the musically sophisticated listener. The physician should remember that side effects that are minimally distressing to other individuals may become incapacitating for the professional musician, who depends on the body's functioning at or near its maximum peak physical and psychological potential. For example, we have reports from musicians indicating that they have ceased using beta blockers because of the side effects of fatigue or depression. Many individuals report depression as a common preconcert symptom. This symptom may be exacerbated by beta blockers in some individuals. Similarly, small increases in muscle weakness and fatigue, or subtle impairments of short-term memory may adversely affect performance. One paper contained reports of performance impairment caused by the novelty of being on stage without the usual physiological accompaniments of stage fright. The unfamiliar body sensations associated with the drug appeared to have been confusing.[32]

TABLE 4—Guidelines for Use of Beta Blockers with Performers

A. In general, the use of the drugs for the treatment of stage fright should be avoided as they have not been approved by the FDA for treatment of anxiety.

B. If the individual, nevertheless, has obtained beta blockers and continues to use them, the following steps should be taken:

1. Review the various adverse effects of beta blockers. If the individual has a medical history that would increase the risk of beta blockers or must take other medication that does not interact well with beta blockers, the drugs should not be prescribed and the individual should be discouraged from taking them.
2. Be sure that the individual has taken a trial of the medication at home before using it for a performance. Advise him/her to be alert to the various side effects that might impair performance.
3. Discuss the nature of the patient's anxiety symptoms. If depression is an important component, warn him/her that beta blockers might exacerbate the problem.
4. Advise the patient that close friends and relatives should be made aware that this drug is being used, in the event that emergency surgery or medication is needed.
5. Inform the individual that the use of this medication has been evaluated only for "one-shot" trials, that information is not available about the consequences of regular use of the medication for this purpose, and that psychological dependence might occur.
6. Caution the individual that sudden withdrawal from the medication may be hazardous after an extended period of use.
7. Indicate that the medication has been evaluated in audition-competition type situations, but not in important solo performances, and that the effects of the medication may detract from the emotional intensity of the performance.
8. Advise the individual to anticipate that physical but not psychological effects of stage fright probably will be affected. This will assist the performer to prepare mentally for the experience of performing on medication.
9. Encourage the performer to investigate psychological techniques (e.g., relaxation training) for managing stage fright. These approaches present fewer risks than beta blockers and may be quite effective in treating stage fright (although the comparative and interactive effects of psychological treatment and beta blockers has not been studied).

Little attention has been paid to the important differences between beta blockers that should modulate their effect on stage fright. For example, lipophilic beta blockers cross the blood-brain barrier readily and are associated with more pronounced central nervous system effects. Beta blockers with ISA may have different effects on stage fright by causing a weak or moderate stimulation while blunting marked activation of beta receptors.

Finally, dose response relationships, including defining the optimal degree of blockade for this application have not been established. It is possible that a low degree of beta blockade may be insufficient to achieve a desirable effect while marked blockade may cause adverse effects or blunt the higher functions needed for optimal performance.

The most serious potential problem in the use of beta blockers is the tendency for many musicians to use the medication without proper medical supervision. It is important that musicians be made aware of the possible risks of improper use, as well as of the various side effects that might impair performance. In view of the possibly serious consequences of beta blockers administration when certain medical conditions are present, musicians also must be made aware of the potential serious risks involved in taking these medications without adequate medical supervision.

Guidelines for the use of beta blockers in treatment of musical performance anxiety are summarized schematically in Table 4.

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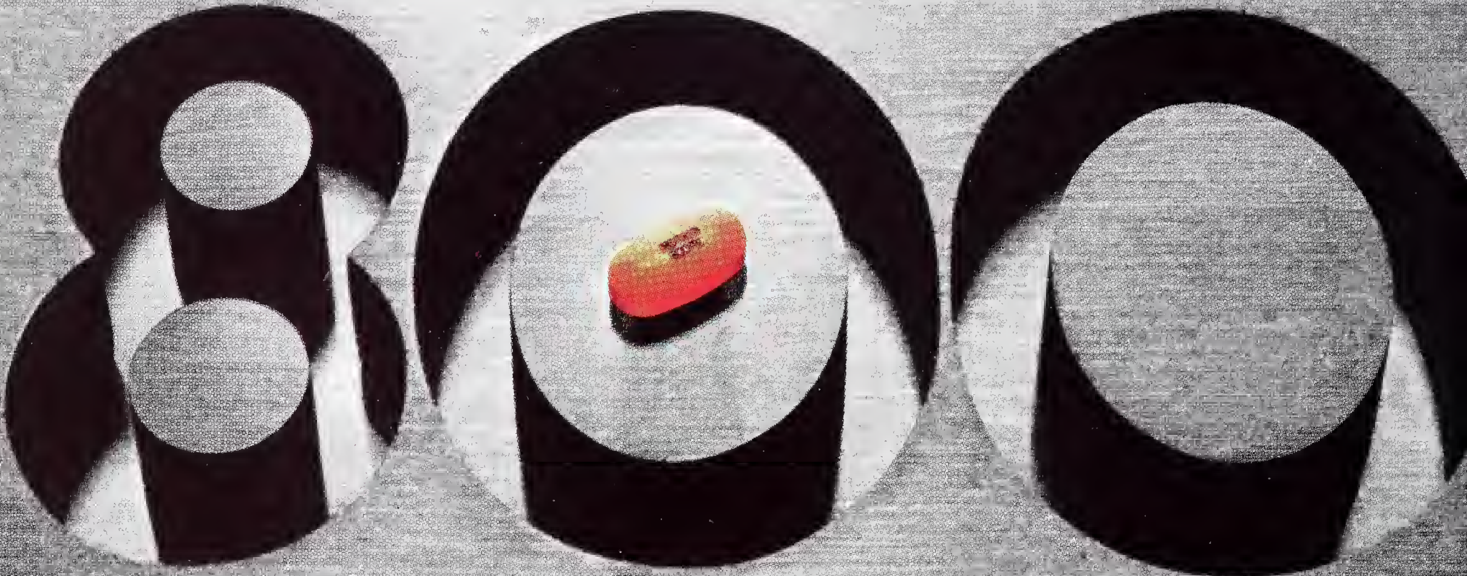

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A REVIEW OF UROLOGIC MEDICAL MALPRACTICE CLAIMS IN NEW JERSEY, 1977 TO 1984†

RICHARD MILSTEN, M.D., AND MARGARET TURNER, CHERRY HILL*

A detailed review of urologic medical malpractice actions in New Jersey was undertaken in order to reduce the risk of future exposure. All claims, since the inception of the physician-owned insurance company, were reviewed and the results are presented.

The medical professional liability problem continues to increase in severity, affecting physicians, hospitals, patients, and the delivery and cost of health care. The specter of a professional liability action haunts the physician. Claims and suits against physicians and hospitals continue to proliferate. This crisis has affected physicians in many ways, including causing some practitioners to retire early, others to change specialties, and most to practice "defensive medicine" as a step to protect against a future charge of omission.

Historically, medical malpractice claims began to make their appearance in meaningful numbers in the 1930s, with a steady rise until World War II, after which there was a slight decline. In the 1960s and 1970s, medical liability claims began to increase. Eighty percent of all medical malpractice law suits filed during the 40-year period between 1935 and 1975 were initiated between 1970 and 1975.

Surgical subspecialists are at the greatest risk. The AMA Socioeconomic Monitoring System indicates that these physicians experienced claims at an average annual rate of 4.4 claims per 100 physicians during the last five years.

In addition to the mental anguish which results from being the defendant in a lawsuit in which one's confidence and personal integrity are attacked, physicians can incur expenses as well as loss of income. In the past five years, 13.6 percent of physicians hired a lawyer in addition to the attorney provided by their insurance firm. This resulted in an average cost to the physician of $9,100. Physicians noted an average of 2.7 work days lost per claim in time spent with lawyers and/or in court.[1]

The following review is a status report of urologic professional liability claims in New Jersey. It is hoped that the data and findings detailed here will be useful to urologists across the country in coping with the crisis.

The Risk Prevention Department of the Medical Inter-Insurance Exchange of New Jersey (MIIENJ), a physician-owned carrier, was established on February 1, 1983, by its Board of Governors. One of the objectives of the Risk Prevention Department is to "prevent malpractice and reduce its impact." Thus, a system was developed to analyze all claim files maintained by MIIENJ in order to identify trends to facilitate risk prevention efforts.

The case files were divided into three categories:

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†Due to an error, a portion of the article was deleted. The article now is reprinted in its entirety.

*From the Medical Inter-Insurance Exchange of New Jersey. Correspondence may be addressed to Dr. Milsten, 122A Haddontowne Court, Cherry Hill, NJ 08034.

surgical, nonsurgical, and anesthesia. The categories then were subdivided into specialties. It was felt that the specific specialty data would be more meaningful to physicians.

The number of practicing urologists may help bring into focus the loss history for the specialty as a whole. The number of urologists insured from February 1977 through February 1984 on an annual basis was: 99, 121, 124, 127, 129, 156, and 179, respectively. The average number of urologists insured for those seven years was 133.

The Risk Prevention Department analyzes and codes all cases based on problem areas identified by the peer review process. The purpose of this analysis is to provide information to specific specialties based on evaluation undertaken by peers and to determine if there are any specific patterns resulting in loss. Since the analysis is based on peer review evaluations, validity as to medical facts already has been determined. Cases were divided into two groups: those closed with payment and those closed without payment.

CASES CLOSED WITH PAYMENT TO THE PLAINTIFF

All cases closed with payment were analyzed. Since inception of MIIENJ in Feburary 1977 through the end of February 1984, there were 41 cases closed with a total indemnity payment of $1,841,000. Payments ranged from $750 to $300,000. The average indemnity was $45,000.

Three patterns appear: problems of diagnosis, unnecessary surgery, and unintentional iatrogenic injury. Of the 41 cases, 6 were identified as problems of diagnosis. The average indemnity paid was $74,722. The following case examples illustrate these patterns:

A 70-year-old white female was seen by the insured urologist for recurrent gross and microscopic hematuria, frequency, hesitancy, and dysuria. Cystoscopic examination and subsequent bladder biopsy showed chronic cystitis and squamous metaplasia. After a significant time lapse, an intravenous pyelogram (IVP) was obtained which showed a nonfunctioning right kidney. A right ureteral catheterization was attempted but failed and no attempt was made to do an occlusive retrograde pyelogram. A simple right nephrectomy was performed but the patient continued with intermittent hematuria. Eventually the diagnosis of a right ureteral tumor was made almost 2 years after the patient's initial presentation. The conclusion of the peer review was an inadequate evaluation of the upper urinary tract particularly with regard to the nonfunctioning right kidney. The final pathology report was a transitional cell carcinoma of the ureter.

Five cases involved performance of an unnecessary procedure; the average payment for these cases was $28,000:

A 58-year-old male was evaluated initially for complaints of sexual dysfunction but also had some mild difficulty with urination. A TURP was performed and the patient did not void well postoperatively. He subsequently developed a stricture and underwent a urethrotomy. Ultimately, he had very poor urinary control. The peer review concluded that the patient's initial symptoms were not severe and did not warrant a TURP. It was noted that only 7 gm of prostate tissue was resected.

The third category was unintentional iatrogenic injury; there were seven cases with an average indemnity of $16,360:

A 22-year-old white female was referred by a nephrologist to the insured urologist for an open renal biopsy. Through a right-sided approach, the liver was inadvertently biopsied. A repeat biopsy was recommended and the patient reluctantly consented with the assurance that a frozen section would be performed to be sure that kidney tissue was obtained. A biopsy was performed on the left side and since the urologist was sure that he had renal tissue, no frozen section was carried out. The final pathology report showed splenic tissue. The patient was ultimately explored to rule out a significant splenic injury and to obtain renal tissue.

Surgical subspecialists are at the greatest risk, according to the AMA.

The remaining 23 cases represented a variety of causes of loss and no specific patterns were observed. Examples of such claims include:

1. Cases involving utilization of the wrong procedure. The patient was treated for recurrent cystitis cystica by stripping of the bladder mucosa. The bladder contracted, the patient developed reflux and was incontinent. Ultimately, hydroureter and hydronephrosis ensued. It was felt that a cystectomy and ureteral diversion would be necessary in the future. The case was settled as it was concluded that this was not a standard procedure nor was the proper informed consent given notifying the patient of this relatively novel approach.

2. Medical errors. A patient with a known history of allergy to sulfa was treated with Bactrim®. The allergic reaction that followed necessitated treatment by a dermatologist.

3. Fall on premises liability. The insured performed a urethral dilatation of the patient, a 50-year old female. Following the procedure, the patient fell in the treatment room sustaining a hairline fracture of the left wrist. There was no issue with the treatment rendered by the insured.

With the exception of one, all of the incidents that prompted litigation occurred while the patient was in a hospital environment. No payment arose from medical treatment rendered in an office setting, except for the above-mentioned case. With the exception of one, all of the individuals were regular patients of the urologist and the care rendered was on a routine basis.

In the category of diagnosis-related problems, the treating physician made an initial diagnosis. The tests ordered did not provide a definitive diagnosis or identify an underlying problem. Additional tests were indicated and/or recommended. However, the urologist did not re-evaluate the situation in light of consistent, repetitive complaints or recommendations from ancillary sources. Little improvement was noted over an extended period of time. It was felt that patients treated over a prolonged period of time with unresolved complaints and symptomatology required continued evaluation and re-evaluation.

Performance of an unnecessary procedure also involved the concept of definitive diagnosis. In these cases, however, surgery was undertaken without a strong rationale for same. The testing did not confirm the initial or admitting diagnosis. Surgery was undertaken in an attempt to treat symptomatology without clinical confirmation of an actual problem.

CASES CLOSED WITHOUT PAYMENT TO THE PLAINTIFF

The second phase of the analysis included cases closed without payment. From February 1977 through February 1984, there were 104 cases closed without payment. These cases represent those situations where there was no liability, and/or legal action was discontinued, or a verdict for the defense was obtained. Of the 104 cases: 6 went to trial with a defense verdict; 1 went to trial, sustained a plaintiff's verdict and was successfully appealed; 60 involved legal action with an eventual dismissal; and 37 claims were closed as a result of inactivity and/or expiration of the statute of limitations.

The expenses incurred by MIIENJ on these cases totalled $201,209. The range was $0 to $26,524 and the average expense was $1,934.

It is worth noting the most common medical conditions and treatments that occurred in these cases. Of the 104 cases closed without payment, diagnostic categories that occurred with regularity were: 7 cases (6.7 percent) involving cancer of the prostate, bladder, or ureter; 10 cases (9.6 percent) dealt with calculus disease of the kidney or ureter; 12 cases (11.5 percent) involved benign prostatic hypertrophy; and 4 cases (2.8 percent) involved torsion of the testicle.

The most common surgical procedures resulting in claims were: 10 cases (9.6 percent) involved TURPs or suprapubic prostatectomy; 9 cases (8.6 percent) involved vasectomy; of these, nearly half centered about the lack of an informed consent; 8 cases (7.6 percent) involved intravenous pyelograms; 15 cases (14.4 percent) involved cystoscopies; and 3 cases (3.8 percent) involved circumcision.

Detailed information regarding most of the above cases is not available since full evaluation was not required as these cases were closed without payment.

Of the cases settled without payment, many arose from relatively simple procedures such as vasectomy, cystoscopic examination, circumcision, or intravenous pyelography. These cases cost MIIENJ nearly $2,000 each and took their toll on the defendant physician by way of anxiety, anger, and frustration, and eventually, an increase in malpractice insurance premiums.

CONCLUSION

During the seven-year period from 1977 to 1984, 145 urology malpractice claims were received by the Medical Inter-Insurance Exchange of New Jersey. Forty-one cases, representing 39 percent of the total cases filed, resulted in an indemnity payment to the plaintiff. The average indemnity was $45,000. Of the cases closed with payment, three problem areas were identified: errors in diagnosis, performance of an unnecessary surgical procedure, or an unintentional iatrogenic injury.

The Medical Inter-Insurance Exchange of New Jersey will continue to monitor cases in order to provide meaningful information to practicing physicians as part of a continuing effort of risk prevention.

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SIALOGRAPHY: A BRIEF UPDATE

EDWARD G. MOSS, M.D., CAMDEN*

Sialography is a simple and safe procedure which can be useful to the clinician in a variety of clinical circumstances. The techniques and uses are discussed.

Sialography, a procedure in which a water-soluble or oily contrast material is injected into salivary ducts, was suggested in 1925 by Barsony.[1] It is a relatively simple procedure to perform and it is associated with only very minimal discomfort to the patient. The information obtained may be useful to the clinician in the diagnosis of salivary gland pathology.

TECHNIQUE AND RESULTS

Scout films of the region of the parotid or submandibular gland are obtained. The films are inspected for technique and for evidence of opaque calculi. The orifice of the appropriate salivary duct is located. The main parotid Stensen's duct lies adjacent to the lateral aspect of the upper second molar and is on a small mound of tissue. The orifice of the submandibular Wharton's duct lies under the tip of the tongue at the tip of the mobile papilla. Lacrimal duct dilators are used sequentially to dilate the appropriate orifice. When the appropriate orifice is dilated, a Rabinov catheter #32 is used for the parotid orifice and a #16 is used for the submandibular orifice. We use Pantopaque® in most of our procedures; 1.5 cc are injected for parotid sialography and 0.5 cc for submandibular sialography. However, the injection is stopped if the patient complains of pain. Films are obtained in the anterior, lateral, and oblique projections. Following the completion of the procedure, a sialogogue such as lemon juice is given and a film is obtained five minutes after emptying. The Table summarizes the experience with our first 50 cases.

INDICATIONS

Sialography can be used to evaluate recurrent pain or swelling in the salivary gland area. It is helpful in the evaluation of a patient with dryness of the mouth and eyes of obscure origin. It may be used to follow up a plain film finding of a calcification in the area of the salivary glands. Sialography is combined with CT scanning of the salivary glands for preoperative evaluation of salivary gland masses. However, with state-of-the-art, high-resolution CT scanners, an intravenous contrast-enhanced CT scan of the salivary glands (intravenous contrast only) can be considered the procedure of choice in evaluating salivary gland masses.[2]

CONTRAINDICATIONS

Acute salivary gland infection is a contraindication to the performance of a sialogram.[3] Allergy to iodine-containing contrast material is a relative contraindica-

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*Dr. Moss is affiliated with Cooper Hospital/University Medical Center, Department of Diagnostic Radiology and Nuclear Medicine, and is Clinical Assistant Professor of Radiology, UMDNJ-Robert Wood Johnson Medical School. Correspondence may be addressed to Dr. Moss, Cooper Hospital/University Medical Center, One Cooper Plaza, Camden, NJ 08103.

TABLE

Results From the First 50 Cases

	Parotid	Submandibular
Normal	16	5
Chronic obstructive sialadenitis without calculi	3	2
Chronic obstructive sialadenitis with calculus	0	2
Chronic nonobstructive sialadenitis including Sjögren's	8	0
Intrinsic masses*	9	0
Postsurgical change	0	1
Sialosis	4	0
	40	10

*Includes 2 carcinomas, 2 abscesses, 4 benign tumors, and 1 leukemic infiltrate.

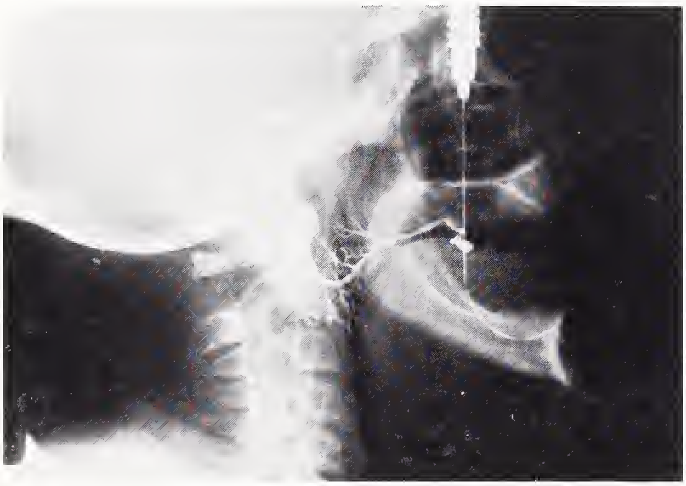

Figure 1—Normal parotid sialogram.

tion if water soluble contrast material is being injected into the salivary ducts.

INTERPRETATION

A normal ductal system shows a smooth, uniform main duct with some minimal gradual tapering of the intraglandular portions of the ductal system (Figure 1).[4]

EVALUATION OF MASSES

Mixed tumors and Warthin tumors are the most common benign salivary gland tumors. An abscess should be considered in the differential diagnosis of salivary gland masses where clinically appropriate. Malignant salivary gland tumors include cylindromas, mucoepidermoid tumors, and adenocarcinomas. Intraglandular masses can be evaluated through the secondary signs of displacement of the intraglandular ductal system. However, determination of location of the mass in relation to the salivary gland and whether or not the lesion is benign or malignant is quite difficult, if not impossible, with routine sialography.

Combining sialography and CT scanning of the salivary glands had been used to better evaluate a mass (Figure 2), but intravenous contrast-enhanced CT scan of the salivary glands (intravenous contrast only) is the initial imaging procedure of choice.

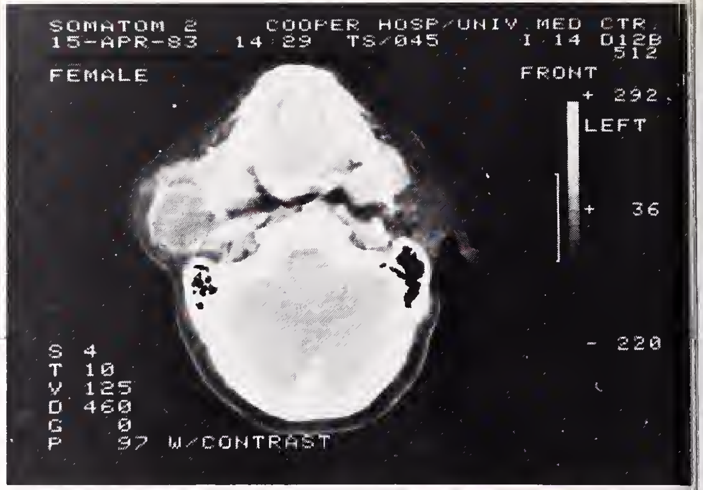

Figure 2—Intravenous contrast enhanced CT sialogram shows mass within right parotid gland, subsequently proved to be an abscess.

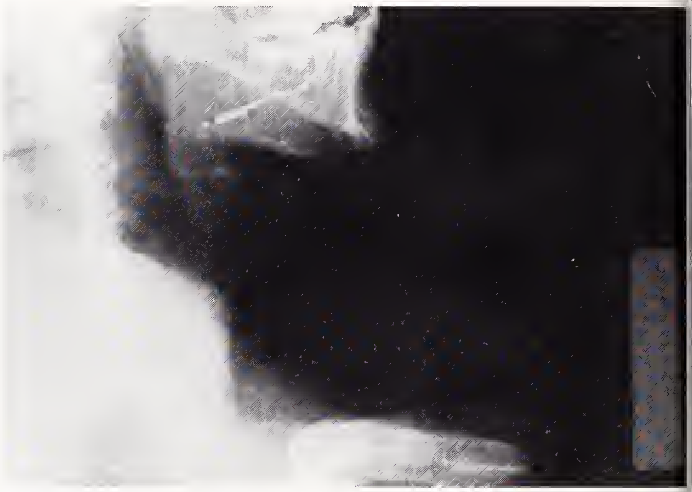

Figure 3—Submandibular sialogram showing retrograde obstruction.

CHRONIC OBSTRUCTIVE SIALADENITIS

Chronic obstructive sialadenitis can be seen with or without stones. An opaque calculus may be seen on the scout film; a nonopaque calculus will show as a filling defect within the ductal system (Figure 3). In cases where no stone is visualized, there usually are singular or multiple strictures seen with intermittent dilatation. This represents the so-called "string of sausage" sign (Figure 4).

CHRONIC OBSTRUCTIVE SIALADENITIS

The first stage shows punctate dilatation in the terminal ductal system, then small globules are seen. These coalesce into a cavitary stage and, finally, a destructive stage (Figure 5).

AUTOIMMUNE PSEUDOSIALECTASIS

Autoimmune pseudosialectasis is a term for clinically different salivary gland disorders, including Sjögren's disease with a unique histological pattern and, therefore, similar sialographic findings. These findings correspond to those described above in chronic nonobstructive sialadenitis.[6]

SIALOSIS

Sialosis refers to noninflammatory, nontender enlargement of both parotid glands. It presents as recurrent and progressive swelling, which is associated

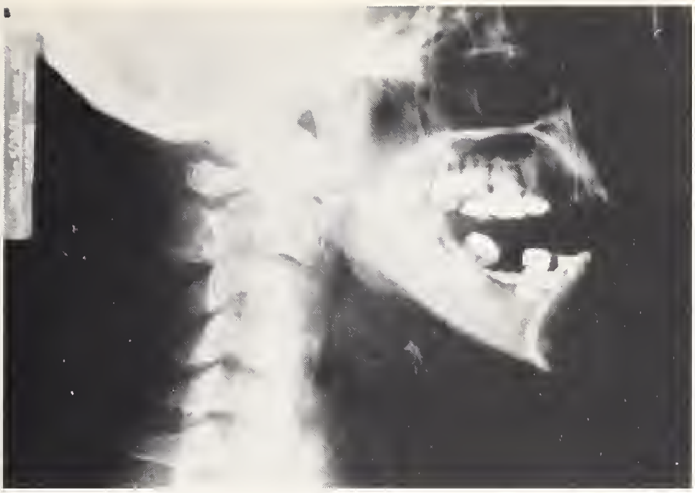

Figure 4—Parotid sialogram illustrating the "string of sausage" sign.

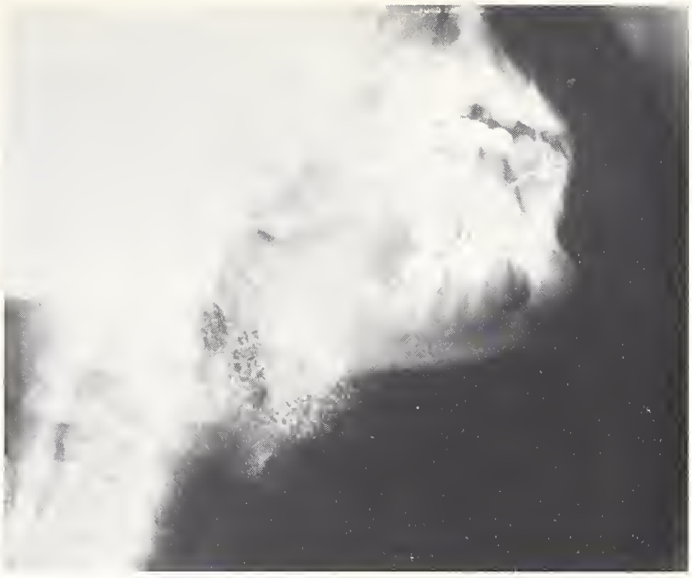

Figure 5—Parotid sialogram illustrating chronic nonobstructive sialadenitis.

with an underlying systemic etiology such as cirrhosis, diabetes, alcoholism, or malnutrition. Contrast sialography discloses an enlarged gland, sparse peripheral ducts, with no ductal displacement or filling defects.[7]

SUMMARY

Sialography is an underused radiographic study which is simple to perform. No significant complications have occurred in our series of 50 cases. The information obtained can be quite helpful to the clinician in the differential diagnosis of salivary gland pathology with the exception of salivary gland masses. Intravenous contrast-enhanced CT of the salivary glands probably is the best method to evaluate salivary gland masses.

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USE OF BOTULINUM IN THE TREATMENT OF 100 PATIENTS WITH BLEPHAROSPASM

JOSEPH A. MAURIELLO, JR., M.D., AND HARRY CONIARIS, NEWARK*

Essential blepharospasm is an involuntary contracture of all four eyelids that may result in functional blindness. Over a two-year period, 97 of 100 patients treated with over 372 low-dose injections of botulinum toxin at our institution have had significant improvement in their condition.

Botulinum toxin causes temporary weakness of skeletal muscles by interfering with the release of acetylcholine at the nerve terminal.[1] Scott has utilized this drug in the treatment of strabismus and in controlling the abnormal contractures of skeletal muscles in various conditions including essential blepharospasm, Meige syndrome, hemifacial spasm, and torticollis.[2]

Essential blepharospasm involves all four lids and causes an increased frequency of blinking that may progress to sustained, involuntary contractures that render the patient functionally blind. Meige syndrome includes involuntary contractures of both the eyelids and the lower facial, oropharyngeal, and neck muscles. The cause of the condition is unknown. Hemifacial spasm involves one side of the face in the distribution of the seventh nerve and is due to compression of the seventh nerve by a branch of the basilar artery at the brain stem or by a brain stem tumor.

Various treatment alternatives for these conditions include psychotropic drugs, surgical ablation of the seventh nerve, extirpation of the orbicularis muscle with browplasty, acupuncture, biofeedback, and vitamin therapy. All present treatments result in limited or temporary control of the disorder.[3,4]

MATERIALS AND METHODS

Botulinum toxin (Oculinum®) is available to a limited number of investigators throughout the country under an experimental protocol sponsored by the National Institutes of Health through Dr. Alan Scott at Pacific Medical Center. The technique of treatment has been detailed elsewhere and involves injecting the drug directly into the orbicularis muscle with a 30-gauge needle.[5,6] No local anesthetic is used. A total of 25 units (10 nanograms) in ten injections is distributed among all four lids as an office procedure. Additional drug is injected in the involved brow, facial, and neck muscles. Patients are examined one to two weeks after injection. At this time, the cornea is evaluated at the slit and the response to treatment is assessed. Repeat and higher dose injections are given if necessary.[5,6] Patients return for reinjections when the disease symptoms recur to the point that the patients barely can function.

RESULTS

We treated 100 patients, 63 females and 37 males, over a 2-year period with botulinum toxin injections. The age at onset of symptoms ranged from 37 to 76 years. The average duration of the disease before the first injection was 6.22 years. Sixty-nine patients had

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*Dr. Mauriello is Assistant Professor of Ophthalmology and Director, Oculoplastic Surgery Service, UMDNJ-New Jersey Medical School, Newark. Mr. Coniaris is a medical student, UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. Mauriello, Eye Institute of New Jersey, 15 South Ninth Street, Newark, NJ 07107.

TABLE

*Local Complications**

Complication	Patients
Tearing and blurred vision	8
Tearing	29
Ptosis	12
Dry eye with lagophthalmos	7
Dry eye without lagophthalmos	5
Total	61

*All side effects were transient and mild

benign essential blepharospasm, 10 patients had Meige syndrome, and 21 patients had hemifacial spasm.

Ninety-seven of 100 patients had significant reduction in eyelid and facial contractures after treatment with botulinum toxin injections. In this study, the onset of action of the drug was approximately three to four days and the duration of action was 12 weeks for essential blepharospasm and 17 weeks for hemifacial spasm. Eighteen percent of patients required a second higher dose injection to control the disease.

No systemic side effects occurred following 372 injections among our patients and no systemic side effects have been reported in the national study. All local side effects were transient, minimal, and well tolerated (Table). Transient symptoms of dry eye occurred in approximately 12 percent of patients due to incomplete eyelid closure and infrequency of blinking after the injections. Mild, transient tearing and blurred vision due to a decreased lacrimal pump mechanism and an increased tear meniscus occurred in 37 percent of patients. All of these symptoms were minimized by instructing the patient to consciously blink to maintain a uniform tear film. Approximately 12 percent of patients developed a mild, transient ptosis for two to three weeks after the injections. In 2 of 372 injections, the ptosis transiently affected vision.

Fourteen patients with facial contractures and 2 patients with neck contractures were treated. The results were as successful as the lid injections as long as the appropriate dose was used. Generally, 7.5 units were necessary to treat either the lower jaw or cheek contractures. Contractures on the side of the nose adjacent to the medical canthus were effectively controlled in 3 patients with 1.5 units. In addition, 42 patients required brow injections at a dose of 5 units into each brow.

SUMMARY

Involuntary eyelid, facial, and neck contractures due to essential blepharospasm, Meige syndrome, and hemifacial spasm have been well controlled in 97 of 100 patients by injections of botulinum toxin. The injections need to be repeated every 12 weeks for blepharospasm and Meige syndrome and every 17 weeks for hemifacial spasm. Minimal local side effects are well tolerated. There are no apparent systemic side effects and no evidence that tolerance develops to the drug. Local injections of botulinum toxin appear to be the treatment of choice for these conditions at the present time.

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ive your angina patients
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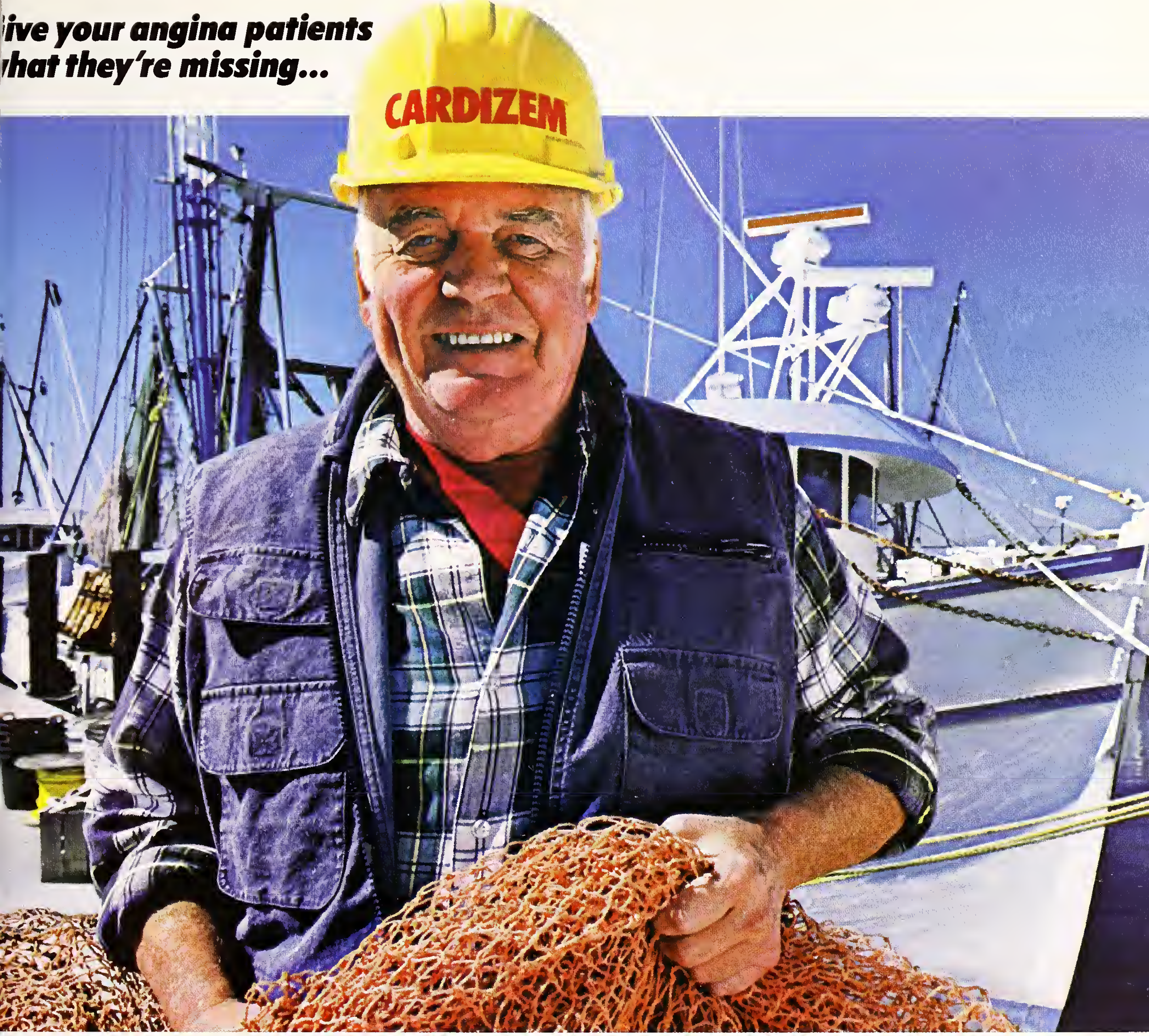

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- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
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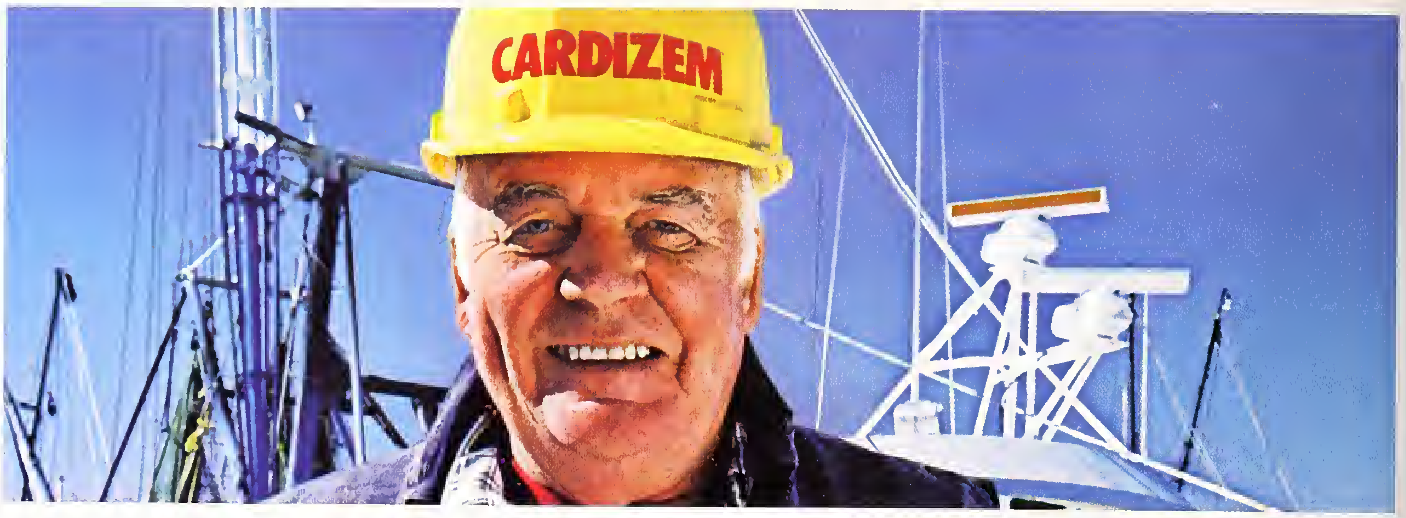
****See Warnings and Precautions.***

Please see brief summary of prescribing information on the next page.



CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. **Congestive Heart Failure.** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. **Acute Hepatic Injury.** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

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QUALITY CARE AND LOWER COSTS: ARE THEY COMPATIBLE?

ELLEN F. SOEFER, M.D., RED BANK*

Continued pressure to lower health care costs negatively will affect the quality of medical care delivered in the United States. Physicians must play an active role in shaping health policy in order to prevent this from happening.

The battle cry today asks: "Can there be quality care at lower costs?" What does this mean for groups in society that either are creating the problem or responding to it? The discussion begins with the premise that in order to maintain an economic climate in this country where quality medical care still can be practiced, physicians must convince their patients—the voting public—that cutting costs leads to a drop in quality.

DISCUSSION

Hospitals are treading water in the alphabet soup of alternative delivery systems and facing drastic changes in reimbursement with resultant fiscal instability. Increased efficiency is going to make hospitals winners in the future. However, the issue that too much efficiency leads to underservice and undertreatment remains to be addressed.[1]

According to researchers at the scientific sessions of the American Diabetes Association, prospective pricing may be impacting on care quality by reductions in patient education and consultations. A review of care received by noninsulin-dependent diabetics admitted for treatment of high blood sugar levels at one hospital in 1981 and 1984 found that length of stay dropped by nearly three days. However, 55 percent of the patients admitted in 1984 were treated in the emergency department the following year, compared with 34 percent of the patients admitted in 1981. Patients admitted in 1984 showed significantly worse blood sugar control one year later.[2]

There are countless references to current and impending physician surpluses. One predicts that the physician-to-population ratio in the late 1990s will be close to double what it was in 1950.[3] This may lead to competition to maintain the patient marketshare. Doctors trained in one specialty may begin to provide other specialty services as well, which eventually could jeopardize care quality.

The government is creating problems with continuous regulatory changes regarding health care delivery. A major question under debate is whether or not third-party payers have the right to limit patients' choices among sources of health care. Some would argue that doctors always have limited patients' choices by guiding patients to specific hospitals and consultants. Dr. Edward R. Annis, a past president of the American Medical Association, has stated that "the ultimate decision about financing will depend upon whether

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*Dr. Soefer died from injuries sustained in an automobile accident in November 1986. She was affiliated with Riverview Medical Center, Red Bank, and Temple University Medical School, Philadelphia. Inquiries can be addressed to the Monmouth County Medical Society, 37 Hwy. 34 South, Colts Neck, NJ 07722.

Americans believe that medical care is a standardized product that should be delivered for a standardized charge or that individual differences in knowledge, training, skill, and personalization of their care should continue to be recognized and sought."[4]

Patients are experiencing shorter hospital stays. Urgicenters, which now are prevalent, add convenience and decreased waiting times. However, continuity of care is limited. Comfort services during hospitalization are less available with cutbacks in staffing. A 1984 survey undertaken by Arthur Anderson and Company and the American College of Health Care Executives suggests that accessibility and costs for health care depend somewhat on the patient's ability to pay. Their predictions for 1995 indicate that there will be increased access and better quality care for HMO enrollees and decreased access and decreased quality care for Medicare recipients, Medicaid recipients, and those who are uninsured without the ability to pay.[5]

Medical education also is feeling the pinch. Decreased reimbursements lead to funding problems for faculty and residents' salaries, a decrease in student loan availability, and increases in medical school tuitions. These restrictions affect the school curricula as well. Students and residents must learn more about alternative delivery systems, about office management, and how to provide quality, cost-effective care, if this indeed is possible. Emphasis also must be placed on improved chart documentation since reimbursement now is linked to retrospective chart review of patient care. Factors such as anticipated debt versus income level and practice autonomy are becoming important variables in medical specialty career choice.[6]

Employers are seeking cheaper care for their employees with a guarantee of quality. Corporations are focusing now more on quality control standards for the products they manufacture and they expect the same of the health care product they purchase. Corporations are beginning to demand in a contract a maximum mortality rate for a given surgical procedure before choosing physicians to provide that surgical service. Jeff C. Goldsmith, Ph.D., reinforced this: "What is happening to our health care system is that economic power is shifting from the people who provide care to the people who pay for it. Those who pay for care are beginning to realize that they have enough economic leverage in an increasingly surplus environment of health resources to dictate to those who provide care, those who manage it, and those who preside over it as trustees. Those who pay the bill increasingly have demanded economic accountability for the cost of health care. The real risk is not an economic risk, it is a risk that we will be unable to function within those constraints. We must make sure that the commitment to the patient that brought everybody into this business is maintained."[7]

Everyone wants a discount. When will this discount start to affect the quality of medical care? This question is not easily answered. There is a constant tug of war regarding cost and quality within which physicians and other health care providers need to stand firm. The public—the patients—should be the allies of the health care providers. However, there is a problem defining quality. The dictionary definition can be adapted to consider quality care to be a degree of excellence in diagnosis and treatment which results in the best possible health care outcome for the patient and the family. It is important to remember that from the consumer's point of view, quality is a perception based on a variety of attributes including price and appearance, as well as health outcome. The medical literature is only beginning to reflect a scientific approach to the study of medical care costs with quality outcome measures. Carefully designed research must be a priority for the immediate future if our country's health care standards are to be maintained.

When budgetary constraints become the driving force in health policy decisions, the ability to maintain quality medical care standards is jeopardized. There undoubtedly is room for improved efficiency in American health care delivery practices. However, continued pressure to lower costs eventually leads to lower quality care. Physicians must become involved in preventing this from occurring.

An effective approach includes ongoing dialogue about these issues between physicians, patients, and legislators. This can be done verbally and/or in writing on a one-to-one basis or within structured groups. Talking to patients about their insurance coverage choices and proposed health care regulation legislation is one option. Being active in local and regional professional societies which are addressing these problems is another option. Identifying key legislators and providing them with information is vitally important.

Establishing a clear definition of quality of care, which is agreed upon by citizens with or without medical background, is the key component in evaluating the impact of cost constraints on care practices. This should be a goal of immediate research.

SUMMARY

Physicians must exert influence on American health policy decisions in order to insure the maintenance of quality care practices. This requires a change from their historically silent, independent approach. Physicians now must adopt a vocal, active role at the grassroots level as well as within national organizations. The goal is achievable, but it will take persistent, dedicated effort to prevent costs from being lowered to the point where they are incompatible with the provision of quality medical care.

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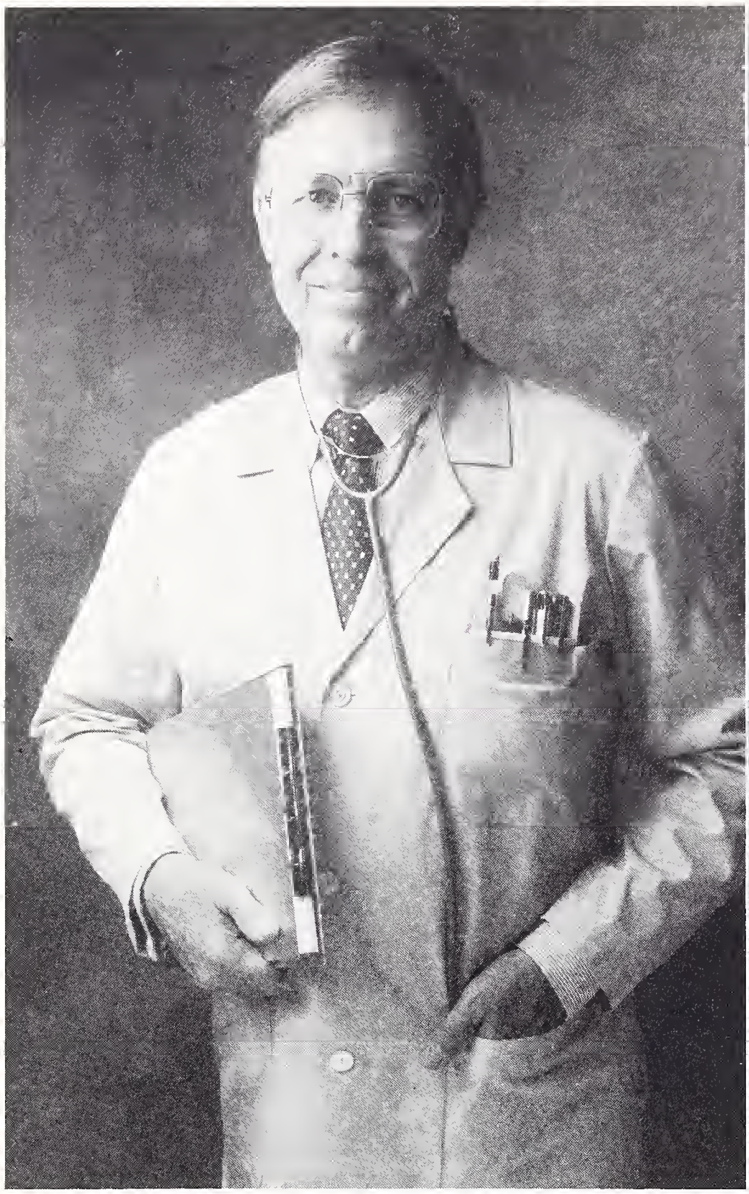

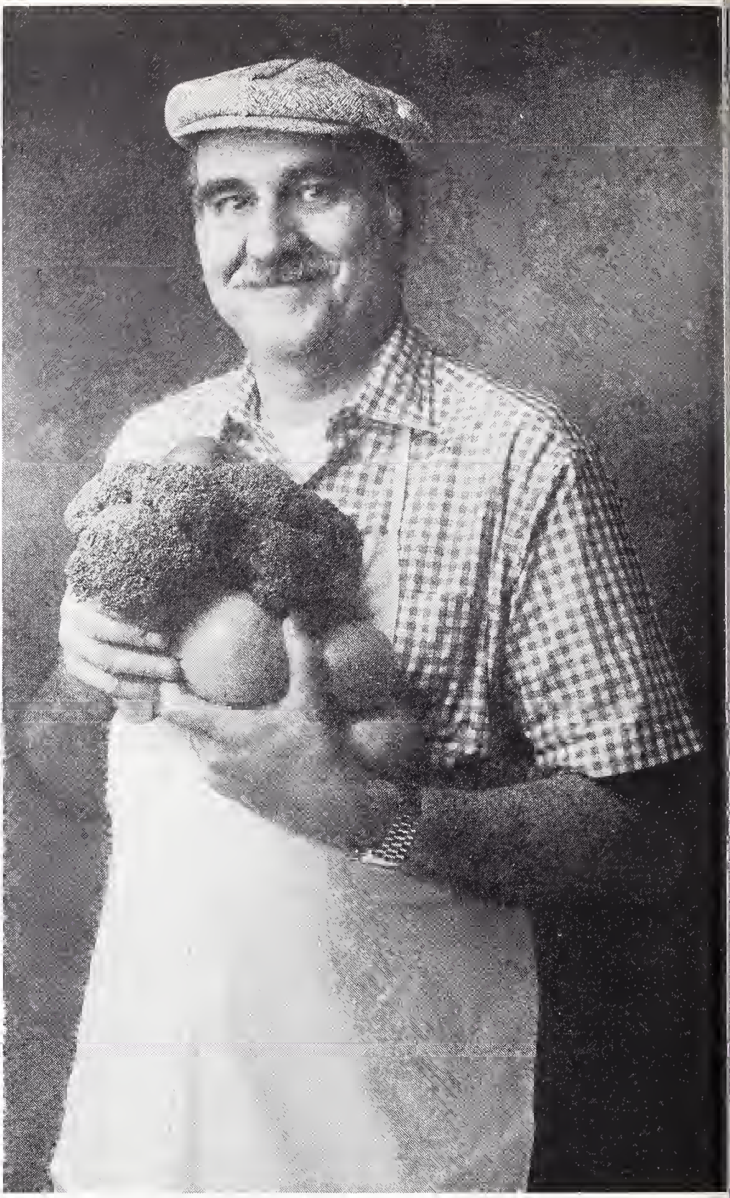

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ADVANCES IN CANCER: INTERFERON—ACHIEVEMENTS AND POTENTIAL

SIDNEY PESTKA, M.D., PISCATAWAY*

In the past decade, the human interferons were purified and characterized; then produced in* Escherichia coli *by genetic engineering. Leukocyte interferon A and 2 have been approved by the FDA for the treatment of hairy cell leukemia.

The natural interferons provided all the materials for fundamental and clinical studies until 1980. Thus, these were relatively rare materials until several groups succeeded in introducing genes coding for individual human interferons into bacteria where it then was possible to obtain expression of the corresponding interferon proteins. It also became feasible at that time to prepare individual subtypes of human leukocyte (α) interferon as well as human fibroblast (β) interferon through bacterial fermentation. Just as it has been necessary to develop purification schemes for the isolation of the natural interferons in order to remove other potentially active interferons and lymphokines as well as other proteins, so purification techniques for the preparation of homogeneous recombinant interferons had to be designed which would remove the contaminating bacterial proteins from the interferon (IFN). This report summarizes procedures involved in the preparation and construction of recombinant interferons as well as some of their biological activities.

ISOLATION OF RECOMBINANTS

The advent of recombinant DNA technology permitted the cloning of genes from one organism into another. Genes, formerly difficult to obtain, now were available to study their structure, function, transcription, and expression. Because a vast base of knowledge already has been developed providing a solid understanding of the regulation of the expression of many genes in *Escherichia coli*, the ground was prepared to use these regulatory elements for expression of foreign genes in bacteria. Interferon was among the first human proteins expressed in *E. coli*.[1-8]

Isolating human interferon DNA sequences was a formidable task since it meant preparing DNA recombinants from cellular messenger RNA (mRNA) that was present at a low level. This task had never been accomplished previously for a protein whose structure was unknown. In addition, in order to reconstruct properly DNA recombinants which would express natural interferon, it was useful to know the partial amino acid sequence of the proteins, particularly at the NH_2- and COOH-terminal ends. Without this information, synthesis of natural human interferon in bacteria would not have been possible. Thus, purification of the human interferons and determination of their structure[9-17] assisted us and others in these efforts.

In order to isolate recombinants containing the human DNA corresponding to the sequence of an α

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*Dr. Pestka is Professor and Chairman, Department of Molecular Genetics and Microbiology, UMDNJ-Robert Wood Johnson Medical School. He formerly was associated with the Roche Institute of Molecular Biology, Nutley. Correspondence may be addressed to Dr. Pestka, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ 08854.

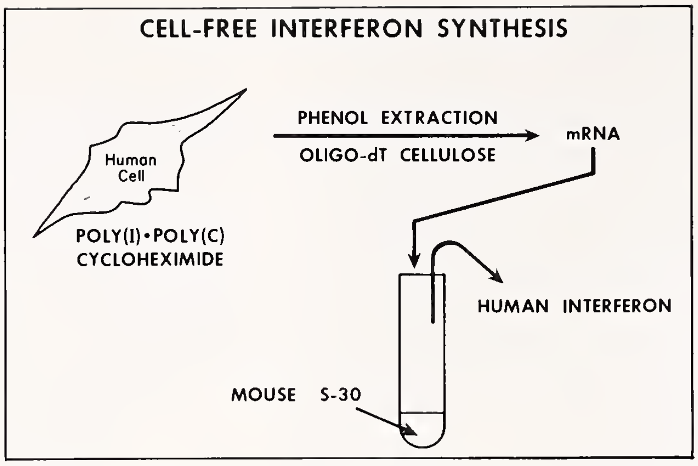


Figure 1—Interferon synthesis in a cell-free system. Human fibroblasts were stimulated to produce interferon by treatment with the inducer, poly (I)-poly(C). Four hours later, the total RNA present was extracted from the cells with phenol, and the fraction enriched in messenger RNA (mRNA) was selected on an oligo(dT)-cellulose column. An S-30 supernatant translation fraction was prepared from mouse cells. This was able to translate the various mRNA species, including that for IFN-β, into the corresponding proteins. The interferon formed was detected in a standard antiviral assay. In this way, biologically active human interferon was synthesized in the test tube for the first time. By injecting the mRNA into intact frog oocytes, the mRNA could be measured at 1/100 to 1/1000 the levels that could be detected in the cell-free extracts.

interferon, the approach that we took involved a number of procedures. First, it was necessary to isolate and measure the interferon mRNA by translation in cell-free extracts (Figure 1)[18,19] and in frog oocytes.[20-23] The next step was to prepare sufficient mRNA from cells synthesizing interferon.[24,25]

A library of complementary DNA (cDNA) was prepared from a template of partially purified mRNA isolated from human leukocytes synthesizing interferon (Figure 2). This provided a large group of cDNA recombinants with DNA copies of all the mRNAs extracted from the leukocytes. The next and the hardest part of the procedure was to find in this vast library of recombinant plasmids those which contained DNA encoding interferon. If we had been able to begin with pure interferon mRNA, this would have been a simple task. However, we did not have pure interferon mRNA. We began with a mixture of mRNA molecules and only a few were interferon-specific. We could show their presence by translating the RNA and assaying the products for interferon activity (Figure 1). In this situation, we had to devise an indirect two-stage procedure. In the first stage, we screened all the bacterial colonies to find those with cDNA made from the RNA of induced cells; among these there might have been some carrying interferon cDNA. We, therefore, screened all the recombinants for their ability to bind to mRNA from cells synthesizing interferon (induced cells), but not to mRNA from uninduced cells (those not producing interferon) (Figure 3). To do this, individual transformant colonies were screened by colony hybridization for the presence of induced-specific sequences with ^{32}P-labeled interferon mRNA (mRNA from induced cells) as probe. In the presence of excess mRNA from uninduced cells (Figure 3), recombinants that were representative of mRNA sequences existing only in induced cells should be evident on hybridization. This screening procedure allowed us to discard about 90 percent of the colonies; since their plasmids carried no induced cDNA, these could not encode interferon.[4,26]

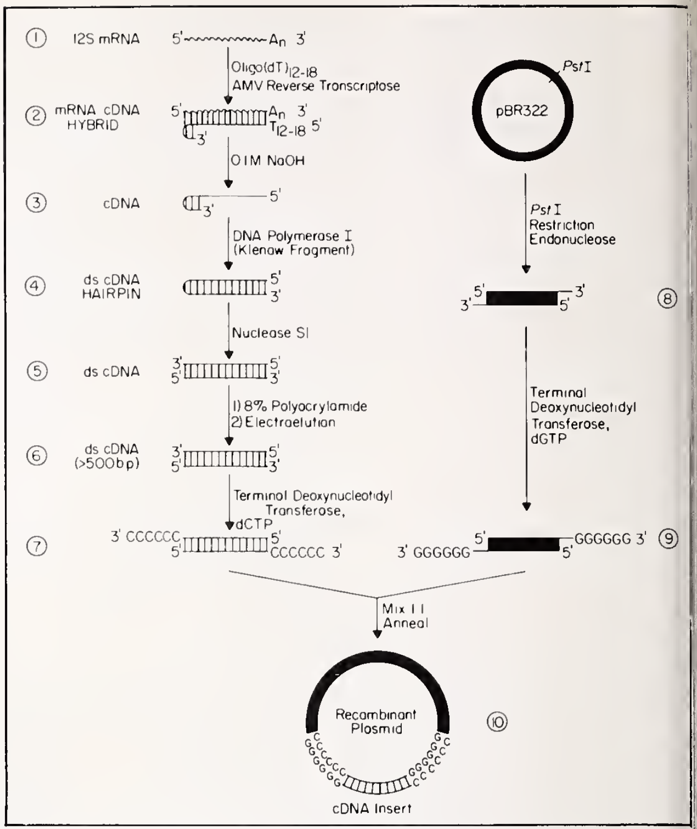


Figure 2—Preparation of interferon DNA recombinants from messenger RNA. *Step 1.* A human leukocyte suspension was induced to form interferon by stimulation with Sendai virus. Six hours later, an extract was made, from which mRNA was prepared that was enriched in 12S mRNA by differential centrifugation. *Step 2.* The mRNA fraction was used as a template with AMV reverse transcriptase in the presence of all four deoxynucleotide triphosphates and oligo(dT)$^{12\text{-}18}$ as a primer to generate a DNA strand complementary to the mRNA (cDNA) forming mRNA:cDNA hybrids. *Step 3.* Treatment with 0.1 M NaOH digested away the RNA, leaving a cDNA fragment with a self-annealed 3′ end. *Step 4.* Extension of the chain with DNA polymerase I (Klenow fragment) produced a double-stranded (ds) cDNA containing a hairpin loop. *Step 5.* Treatment with nuclease S1 opened the hairpin loop. *Step 6.* The ds-cDNA was sized on an 8% polyacrylamide gel followed by electroelution to give a fraction containing at least 500 base pairs. *Step 7.* Treatment with terminal deoxynucleotidyl transferase in the presence of dCTP added cytosine homopolymer tails at the 3′ ends of each strand. *Step 8.* The plasmid pBR322 was cleaved (linearized) at the *PstI* site with *PstI* restriction endonuclease. *Step 9.* Homopolymer tails of oligodeoxyguanylate (oligo-dG) were added to the 3′-ends of the linearized plasmid DNA with terminal deoxynucleotidyl transferase in the presence of dGTP. *Step 10.* The two fragments with complementary sticky ends were mixed in equal proportions and annealed to yield a recombinant plasmid. A larger number of similar plasmids not containing interferon genetic information also were formed during this procedure. This cDNA library contained copies of all the mRNA in these cells including interferon-specific mRNA.

In the second stage, we had to identify those recombinants containing the interferon DNA sequences among the remaining 10 percent, i.e. about 1,400 in total. To do this, we pooled the recombinant plasmids in groups of 10 and examined these for the presence of interferon-specific sequences by an assay which depends upon hybridization of interferon mRNA to plasmid DNA.[4,27] Plasmid DNA from 10 recombinants was isolated and covalently bound to diazobenzyl-oxymethyl (DBM) paper (Figure 4). Messenger RNA from induced cells was hybridized to each filter. Unhybridized mRNA was removed by washing. After the specifically hybridized mRNA was eluted, both fractions were translated in *Xenopus laevis* oocytes. Once a positive group had been found (one in which the specifically hybridized mRNA yielded interferon after microinjection into frog oocytes), it was necessary to identify the specific clone or clones containing interferon cDNA. The 10 individual colonies were grown, the plasmid DNAs were prepared, and each individual DNA was examined by mRNA hybridization (Figure 4). By these procedures a recombinant, plasmid 104 (p104), containing most of the coding sequence for a human α interferon was identified.[4] The DNA sequence was determined and found to correspond to what then was known of the amino acid sequence of purified human leukocyte interferon.[14,15] The cDNA insert in p104 contains the sequence corresponding to more than 80 percent of the amino acids in leukocyte interferon, but not for those at its amino-terminal end. It, therefore, was used as a probe for finding a full-length copy of the interferon cDNA sequence which could be used for expression of human leukocyte interferon in *E. coli*. In addition, p104 DNA was used to isolated DNA sequences corresponding to α interferons directly from a human gene bank.

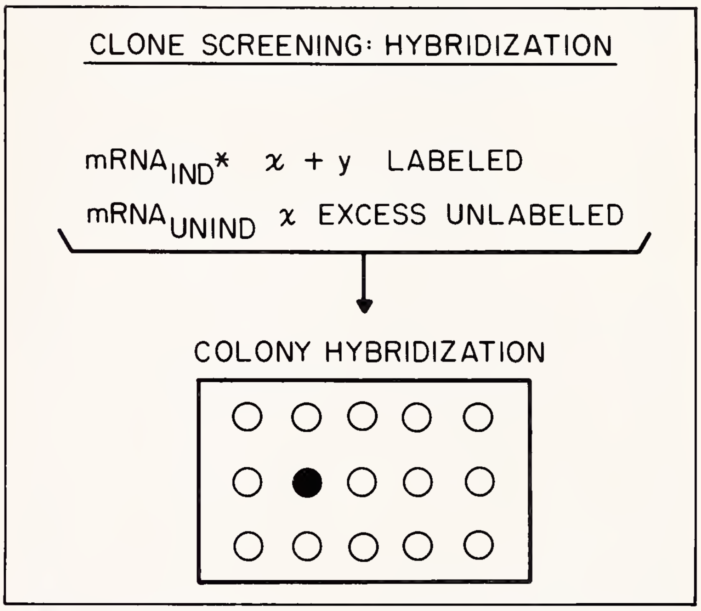
Examination of the coding regions of the leukocyte interferon genes that have been isolated in our laboratory and others have shown that these correspond to a family of homologous proteins, the α interferon subtypes[1,2,28] which are closely related to each other and yet each unique in amino acid sequence (Figure 5). Thus, the previously discovered heterogeneity in human leukocyte interferon was shown to be at least in part the result of distinct genes representing each expressed human leukocyte interferon sequence. The cloned human IFN-αA, the first one we isolated, corresponds to the natural interferons which we purified from the mixture present in leukocyte interferon by high performance liquid chromatography and termed α_2 and β_1.*

By similar procedures to those described for plasmid 104, plasmid 101 was shown to contain the sequence for human fibroblast interferon.[4] Thus, the nucleotide sequences coding for human leukocyte and fibroblast interferons were identified.

CONSTRUCTION OF EXPRESSION VECTORS

Expression of human leukocyte interferon in E. coli. As noted, p104 contained most of the sequence for a human α interferon but did not contain the sequence coding for the amino terminus of the protein. Accordingly, p104 was used to screen additional cDNA recombinants and several which hybridized to its unique interferon-coding sequence were identified.[29] Most contained interferon DNA sequences of sufficient size to code for an entire α interferon protein.

Our first full-length recombinant isolated corresponded to IFN-αA.[4,29] Existing knowledge about interferon protein sequences permitted us to determine the correct translational reading frame, and hence to predict the entire amino acid sequence for the interferon encoded by this recombinant. The mature IFN-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mRNA$_{IND}$* x + y LABELED
mRNA$_{UNIND}$ x EXCESS UNLABELED
COLONY HYBRIDIZATION

Figure 3—Schematic outline of hybridization procedure. *E. coli* cells were transformed with the recombinant plasmids generated as described in Figure 2. Colonies derived from individual transformed bacterial cells were transferred to filter paper, fixed, and probed with a ^{32}P-labeled mRNA preparation from cells producing interferon and therefore enriched in interferon mRNA (x + y). The hybridization was performed in the presence of excess unlabeled mRNA from uninduced cells (x). This procedure identified bacterial colonies containing DNA coding for the protein specifically formed in induced leukocytes, including interferon. The induced-specific sequences (y) include interferon sequences as well as others that are induced concomitantly with interferon.

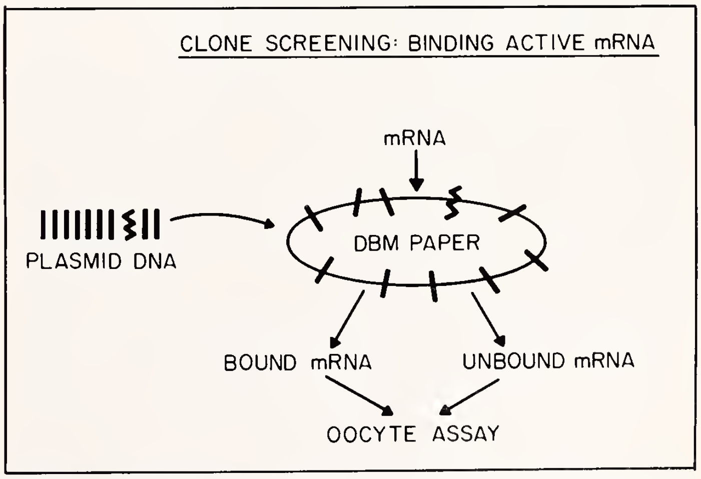

Figure 4—Schematic illustration of screening of recombinants with DBM paper. Plasmid DNA was isolated from a pool of colonies, e.g. 10 colonies as shown in the Figure, and bound covalently to diazobenzyloxymethyl (DBM) paper. To detect a recombinant containing an interferon sequence (shown as a zig-zig in the illustration), mRNA prepared from cells synthesizing interferon was hybridized to the bound DNA. After unhybridized mRNA had been removed by washing, the specifically hybridized mRNA was eluted and translated in *Xenopus laevis* oocytes. By this procedure, those pools of clones in which at least one recombinant contained an interferon sequence were identified. Thereafter, individual clones in each pool were separately screened by the same procedure. Unbound mRNA was microinjected into oocytes as well as a control to ascertain that the mRNA was not destroyed by the manipulations.

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*The natural interferons which we isolated from the mixture present in leukocyte interferon by high performance liquid chromatography[9-11] then were designated $\alpha 1$, $\alpha 2$, $\beta 1$, $\beta 2$, $\beta 3$, $\gamma 1$, $\gamma 2$, $\gamma 3$, $\gamma 4$, $\gamma 5$, and δ. Unfortunately, the same terminology was later applied to designate leukocyte, fibroblast, and immune interferons, respectively as α, β, and γ. The α_2 and β_1 indicated here refer to two different leukocyte interferon fractions.

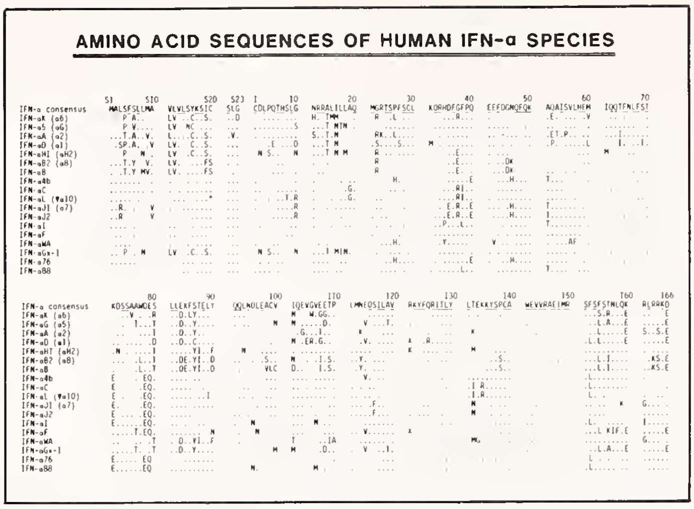

AMINO ACID SEQUENCES OF HUMAN IFN-α SPECIES

Figure 5—The amino acid sequences of human leukocyte interferon (IFN-α) species derived from cDNA or genomic DNA sequences. Sequences, including the signal peptide (S1-S23), are presented in comparison with a consensus sequence. Corresponding residues are presented only when they differ from the consensus sequence. Residues which are common to all listed sequences are underlined in the consensus sequence. Sequences A-L are from the laboratories of Pestka, Goeddel, and colleagues, whereas sequences with numeric designations are from the laboratory of Weissman and colleagues. Closely related sequences are listed together. The cloned αL (Ψα10) sequence has a termination codon within the signal sequence (indicated by an asterisk) and may therefore represent a pseudogene; however, the coding region for the mature protein is otherwise normal. The following interferons are of identical amino acid sequence: αK = α6; αJ = α7; αB2 = α8; αL = Ψα10. The following interferons are identical except for the residues shown in parentheses: IFN-αA (Lys 23), IFN-α2 (Arg 23); IFNαD (Val 114), IFN-α1 (Ala 114); IFN-αJ1 (Lys 159, Gly 161), IFN-αJ2 (Gln 159, Arg 161), IFN-α7 (Lys 159, Gly 161); IFNαH1 (Phe 152), IFN-αH2 (Leu 152). A gap was introduced at position #44 in IFN-αA to provide for maximum alignment with the other species. Gaps are indicated by dashes. In several positions, alternative amino acids could be chosen for the consensus sequence: #S11, V or L; #78, D or E; #79, E or Q; #80, S or T; #83, D or E; #86, S or Y; #154, F or L; #166, D or E.

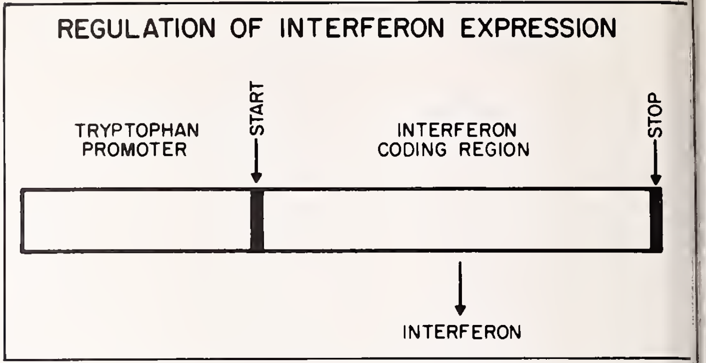


Figure 6—Regulation of interferon expression in *E. coli*. A 300-base pair fragment of *E. coli* DNA was prepared with the restriction endonuclease *Eco*RI. This contained the tryptophan (*trp*) promoter-operator and ribosome-binding site. The complete DNA sequence coding for IFN-αA was prepared and an ATG codon (which is the signal for the initiation of translation of the mRNA into a protein) was placed immediately in front of the codon for the first amino acid of the mature protein. The *Eco*RI *trp* promotor-operator fragment was ligated distal to this ATG codon and inserted into plasmids. Bacteria transformed with a plasmid containing this control region and the interferon-coding sequence formed interferon in large amounts in the absence of tryptophan. Leukocyte IFN-αA expression was thus regulated by the *trp* promoter-operator.

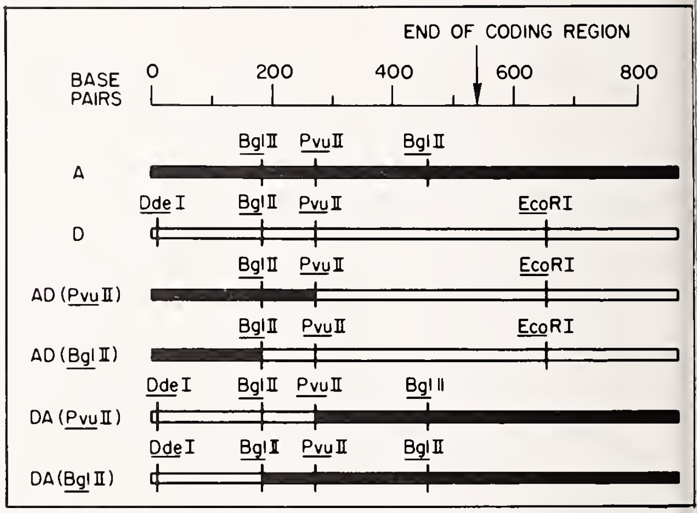


Figure 7—Schematic restriction maps of the plasmid DNA regions coding for the mature proteins of IFN-αA and IFN-αD, showing the sites for cleavage by the restriction enzymes *Bgl*II and *Pvu*II. Hybrids A/D, D/A, and A/D/A were formed by ligating the appropriate segments generated with *Bgl*II and *Pst*I.

αA was expressed directly by reconstruction of the recombinant.[29] The leader sequence of the protein was removed and an ATG translation-initiation codon was placed immediately preceding the codon for the first amino acid of mature leukocyte interferon. Next, a 300-base pair *Eco*RI fragment of *E. coli* DNA was constructed, containing the tryptophan (*trp*) promoter-operator and the *trp* leader ribosome-binding site, but stopping short of the ATG sequence needed to initiate translation of the leader peptide of the *trp* regulatory region. This DNA fragment was attached to the reconstructed human leukocyte interferon preceding the ATG codon (Figure 6). Inserted into *E. coli*, the recombinant yielded high levels of activity, about 2 x 10^8 units (about 1 mg) of interferon per liter of culture. The interferon protein produced in *E. coli* behaves similarly to interferon formed directly by human leukocytes: it is stable to acid treatment; is neutralized by antiserum to human leukocyte interferon; and binds to monoclonal antibodies specific for human leukocyte interferon. It can be purified to homogeneity with the use of monoclonal antibodies.[30,31] With improvements in fermentation and in the bacterial strains, high levels of human α interferons (1 x 10^{10} units per liter; 50 mg/liter) can be reached in large-scale cultures. Similar high levels have been produced with other interferons and other eukaryotic proteins.

Expression of human fibroblast interferon in E. coli. In contrast to the multiple species of α interferon, experiments have indicated that there is only a single human β interferon gene which corresponds to this recombinant. Mature human IFN-β was expressed directly in *E. coli* under *trp* promoter control (Figure 6) similar to the expression of IFN-α.[8] The IFN-β produced in bacteria is similar to that formed by human fibroblasts. However, IFN-β made in bacteria is not glycosylated, whereas that made by human cells contains carbohydrate.[32,33]

Other expression vectors. Although *E. coli* has been the predominant host used for the production of recombinant proteins, other host-vector systems have been studied and may be used more in the future. For example, the human interferons have been expressed in yeast vectors.[34,35] In addition, the regulatory regions of eukaryotic viruses have been utilized to obtain expression of interferons.[36-40] Furthermore, by direct transformation of cells with the human IFN-β gene together with the gene for dihydrofolate reductase resistance, the human interferon gene has been amplified in Chinese hamster cells.[41] With the use of such eukaryotic vectors, glycosylated human β interferon has been produced at high levels.

CONSTRUCTION OF SYNTHETIC INTERFERONS

With the isolation of multiple α interferon cDNA and genomic recombinants, it was possible to construct hybrid molecules. Those recombinants that have restriction endonuclease sites in common can simply be cut and relegated to the respective complementary segments. For example, human IFN-αA and IFN-αD were cut at their common *Bgl*II and *Pvu*II restriction endonuclease sites and relegated, giving rise to hybrid molecules (Figure 7).[42-44]

Since IFN-αD exhibits greater antiviral activity on bovine cells than on human cells, whereas IFN-αA has approximately similar activity on both, it was of interest to examine the activity of the hybrid molecules. Their antiviral activity seems to correlate with the amino-terminal half of the molecule, the antiviral activity of the A/D hybrids resembling that of IFN-αA, and the antiviral activity of the D/A hybrids resembling that of IFN-αD. Interestingly, some hybrid molecules have activities which are not exhibited by either of the parent molecules. For example, the hybrid IFN-αA/D (*Bgl*II) is quite active on mouse cells whereas neither parent molecule is. A change in a single amino acid of IFN-αA is able to alter the activity of the molecule. An astronomical number of novel interferon molecules can be generated by making hybrids, by amino acid substitutions, and by other alterations. Thus, it may be possible to find molecules with specific properties, for example, with potent antiviral activity but without antiproliferative activity or certain side effects; or to tailor the molecules to exhibit the properties desired, such as high antitumor activity. One such site-specific mutation has replaced the cysteine at position 17 in IFN-β with a serine to provide a molecule with greater stability and activity.[45]

PURIFICATION OF RECOMBINANT INTERFERONS

To purify interferons expressed in bacteria the procedures for purification of any protein from bacteria in general can be followed. The bacteria need to be broken to prepare a crude extract. Following this, various ion exchange or sizing chromatographic steps can be utilized to purify the molecules. In general, if a specific monoclonal antibody is available that binds the interferon, its use in an affinity column can greatly simplify the purification. As an example, the purification of recombinant human IFN-αA is described briefly.

Purification of recombinant Hu-IFN-αA. Monoclonal antibodies to the human leukocyte interferons can be used to purify recombinant human IFN-αA produced in bacteria.[30,31] After *E. coli* containing this interferon are disrupted, unbroken cells and cellular debris are removed by centrifugation. The interferon and soluble bacterial proteins remain in the cell lysate. Nucleic acids (DNA and RNA) that make the lysate viscous, and thus difficult to handle easily, are precipitated by polymin P. The soluble proteins remaining in the lysate are concentrated, if necessary, and passed directly through an immunoabsorbent column containing a monoclonal antibody to human leukocyte interferon. The antibodies bind only the interferon; all the other components and proteins pass through the column. After the column has been washed, the IFN-αA bound to the column is eluted with an acidic solution[30,31] yielding a virtually pure interferon solution (Figure 8). The column is washed and neutralized so that it can be used again. The interferon solution is concentrated by passage over a column of carboxymethylcellulose.[30,31] The specific activity of the purified IFN-αA made in bacteria is very similar to that of the same human α interferon subtype synthesized by human leukocytes.

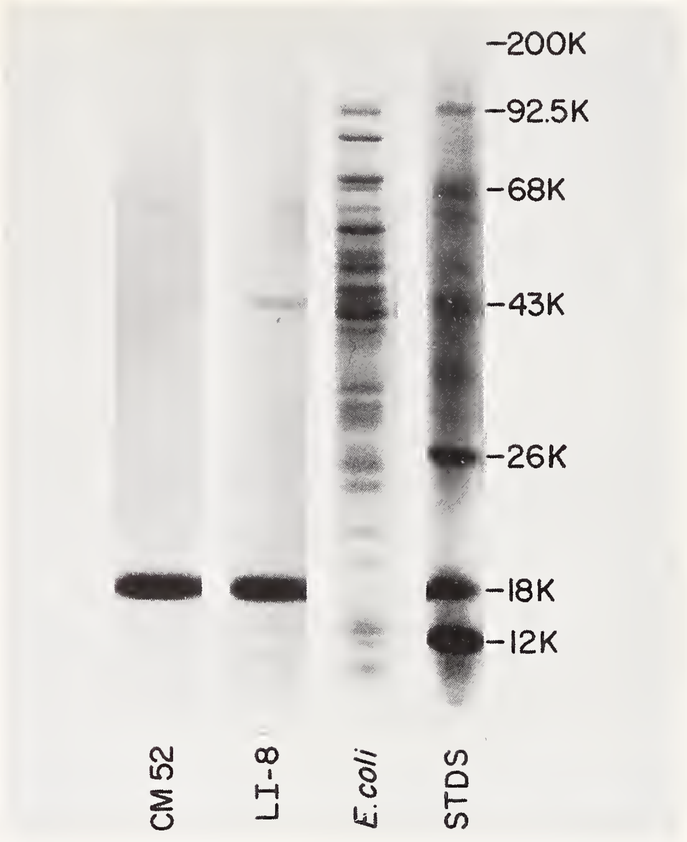


Figure 8—Sodium dodecyl sulfate-polyacrylamide gel electrophoresis of human interferon produced from *E. coli*. Lane LI-8: material eluted from a specific monoclonal antibody column; Lane CM-52: the same material after final purification; *E. coli*: total proteins from an S30 extract of bacterial cells producing IFN-αA; STDS: standard molecular weight markers, as indicated. Approximately 20 μg of each fraction was used for to electrophoresis. The gel was stained with 2.5 percent Coomassie brilliant blue.[30,31]

BIOLOGICAL ACTIONS

The recombinant IFN-αA exhibits antiviral activity and antiproliferative activity comparable to those of crude and purified natural leukocyte interferons.[44,46] It stimulates natural killer cell activity[47] and cellular differentiation of muscle;[48] and it inhibits cloning efficiency of human myeloid cells.[49] In studies of human melanoma cells, it was found that interferon is a potent stimulator of differentiation.[50] We have analyzed the effects of various human interferons produced in bacteria and the antileukemic compound mezerein (MEZ) on growth and melanogenesis in human melanoma cells. In four human melanoma cell lines, recombinant human fibroblast interferon (IFN-β) was more active than recombinant human leukocyte interferons

[IFN-αA, IFN-αD, or IFN-αA/D (*Bgl*)] in inhibiting cellular proliferation. Mezerein, an analog of the tumor promotor TPA (12-*O*-tetradecanoyl-phorbol-13-acetate), can itself inhibit growth of cells as well as stimulate differentiation of melanoma cells. The combination of interferon and mezerein resulted in a very potent synergistic inhibition of cellular proliferation in all four melanoma cell lines examined.[50] The results indicated that the antiproliferative effect of interferon towards melanoma cells can be enhanced by treatment with mezerein and that this synergistic effect is associated with an enhancement of terminal differentiation. Since a major problem limiting the utility of interferon as an antitumor agent in vivo may be the development of resistant cell populations, the combination of interferon with agents capable of inducing tumor cell differentiation may help to circumvent this problem and thereby increase the clinical efficacy of interferon as an antitumor agent.

Monoclonal antibodies reactive with the surface of human breast carcinoma cells have been generated and characterized.[51] The immunogens used were membrane-enriched fractions of metastatic carcinoma lesions. Recombinant interferon has been employed to enhance the expression of specific tumor-associated antigens on the surface of tumor cells already expressing the antigen, and to induce their specific expression on the surface of carcinoma cells not previously expressing the antigen.[51] Such enhancement of tumor antigens can improve gamma scanning for the detection of tumor masses and may serve to improve tumor immunotherapy with monoclonal antibodies.

The differentiation of human leukemic HL-60 cells from their predominantly promyelocyte form to a neutrophil-like state can be induced by the addition of dimethylsulfoxide (DMSO) or retinoic acid (RA) to the growth medium.[52-56] Within two days after the addition of DMSO or retinoic acid to growing HL-60 cells, the binding of IFN-αA to treated cells increases significantly relative to its binding to untreated cells.[57-60] The difference in binding of IFN-αA between the treated and untreated cells continues to increase for at least three days. Analysis of binding curves of IFN-αA to neutrophil-like and promyelocytic HL-60 cells leads to the conclusion that the increased binding of [^{125}I]IFN-αA to neutrophil-like cells is primarily the result of an increase in the number of binding sites on these cells.

The increased binding of [^{125}I]IFN-αA to differentiating HL-60 cells precedes terminal differentiation to banded or segmented neutrophils and more likely correlates approximately with the transition to myelocytes. The increased binding is significant by 24 hours after exposure to DMSO, and thus is a reasonably early change in the macromolecules defining cellular phenotype. Since retinoic acid causes only a slight increase in differentiation HL-60 cells and a slight increase in the binding of [^{125}I]IFN-αA, it is reasonable to suggest that the increased binding of interferon may be tightly linked to the differentiation of these cells.

It is interesting that, of the tissue culture cells which we have examined, including Daudi, U937, KG-1, and HL-60 cells, the promyelocytic HL-60 line has the lowest binding of IFN-αA, whereas the differentiated neutrophil-like HL-60 cells, show binding closer to that of the other cultured lines.[57] The changes noted in IFN-αA binding to HL-60 cells during myeloid differentiation and during monocytoid differentiation[57,60] may ultimately be useful in examining the expression and control of the IFN-α receptor.

INTERACTIONS OF INTERFERONS WITH CELLS

Shortly after pure interferons were available, they were labeled to study their binding to cells.[61] The interferon receptors appear to consist of two types: one that binds IFN-α and IFN-β, but not IFN-γ; the second recognizes IFN-γ, but not IFN-α or IFN-β. The synergy of IFN-α and IFN-β on the one hand with IFN-γ on the other is a result of their respective binding to different receptors and resultant distinct mechanistic pathways. Although synergy or additivity is usually the case with IFN-α/IFN-β and IFN-γ, it is possible that their individual pathways may conflict so that they may antagonize their respective actions. Synergy has been demonstrated for their antiviral and antiproliferative activity; antagonism in the case of some macrophage functions.

CLINICAL TRIALS

Currently IFN-αA is being used in clinical trials in humans[62] as an antitumor agent as well as an antiviral agent. In June 1986, the Food and Drug Administration approved human interferon αA and α2 for the treatment of hairy cell leukemia: these interferons are designated human leukocyte interferon α-2a, recombinant (Roferon-A/Roche), and leukocyte interferon α-2b, recombinant (Intron-A/Schering), respectively. Of the interferons, leukocyte interferon αA was the first interferon produced in bacteria to be tested in man, but other leukocyte interferons as well as fibroblast and immune interferon now are being tested. Some types, individual species, and combinations of interferon may be more effective than others against particular diseases and under particular conditions. Moreover, it may be possible as more is learned about the mechanisms involved to tailor interferon molecules to optimize particular effects.

Finally, it should be noted that the introduction of a recombinant interferon into clinical trials in humans was achieved in record time by the rapid transfer of technology from laboratory-level basic science to appropriate pharmaceutical areas. This required the enthusiasm, dedication, and cooperation of many individuals as well as guidance from the staff of the Division of Biologics of the Food and Drug Administration. Additional clinical trials are progressing and results will be forthcoming.

REFERENCES

References are available upon request.

DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; Physicians Seeking Location in New Jersey

Trustees' Minutes November 9, 1986

A regular meeting of the Board of Trustees was held on Sunday, November 9, 1986, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Report of Executive Director . . .
(1) Dues Delinquency Status . . . Noted that 243 MSNJ members were dropped for nonpayment of dues.
(2) MSNJ Financial Statements . . . Approved financial statements for the period ending September 30, 1986.
(3) Medicare Highlights, Budget Reconciliation Act of 1986 . . . Distributed a summary of the Medicare provisions of the Omnibus Budget Reconciliation Act of 1986, which appeared on page 777 in the December 1986 issue of *NEW JERSEY MEDICINE.*
(4) New Jersey State Medical Underwriters . . . Voted to support a proposal by the Underwriters concerning renting additional office space from MSNJ; this space will consume virtually all of MSNJ's open land for parking and almost the entire warehouse area.
(5) Ethics Conference . . . Voted in favor of cosponsoring an ethics conference in the spring of 1987 with the New Jersey Hospital Association.

NJ Hospital Association . . . Noted the following items reported by Mr. Scibetta, President of NJHA: uncompensated care trust act bill in the Senate and Assembly awaiting a vote; PRO activities and meetings with NJHA to discuss modifications to the hospital/PRO agreement; AIDS "Operation Look Back" program involving identification of patients who may have received blood contaminated with the AIDS virus before screening measures were in place; and capital reimbursement under New Jersey DRG system.

Committee on Impaired Physicians . . . Unanimously adopted the following Resolution:

Whereas, after nine years of faithful service to the Medical Society of New Jersey as an advocate for and founding member of the Committee on Impaired Physicians, Doctor Edward M. Coe has submitted his resignation from that Committee; and

Whereas, Doctor Coe's vigorous leadership played a major role in the establishment of a Committee on Impaired Physicians in this state, as well as in the commitment of the Medical Society of New Jersey to establish and fund a program with a full-time medical directorship and staff; and

Whereas, as a consequence of these actions, the Medical Society of New Jersey has achieved national recognition for its outstanding program; now therefore be it

Resolved, that the Medical Society of New Jersey and the Committee on Impaired Physicians express their heartfelt gratitude to Doctor Edward M. Coe for this further evidence of his deep personal commitment to this program, to the Medical Society of New Jersey, and to all of his fellow physicians; and be it further

Resolved, that a copy of this Resolution be spread upon the minutes of the meeting of the Board of Trustees.

Unfinished Business . . . Agreed to postpone action on the matter of the standing of the New Jersey Urologic Society until the December meeting.

New Business . . .
(1) Physicians' Assistants . . . Reaffirmed opposition to the licensure and/or registration of physicians' assistants in New Jersey because it neither will contribute to the quality of medical care nor decrease the cost of medical care.
(2) Bergen County Medical Society versus PRO of New Jersey, Inc. . . . Referred this suit to Mr. Maressa for his review and report.
(3) Christopher T. Reilly, M.D. . . . Moved to present a memorial resolution to the family of Dr. Reilly in recognition of his dedicated service to the Medical Society of New Jersey.

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.

Governor Kean's challenge that UMDNJ become one of the nation's top 25 health science centers has become the unifying theme in all of our institutional planning. In my "State of the University" message this month I will outline the steps the University plans to take in 1987 and beyond to meet the Governor's challenge. It seems appropriate here to look back on the progress made in 1986.

- The Foundation of UMDNJ in October launched a $27.5 million capital fundraising campaign to finance major medical and research projects in the areas of cancer, cardiovascular disease, indigent care, chronic pain, child development, and environmental medicine. The campaign also will help the University attract more world-class faculty members; provide financial aid to bring the best and the brightest students to UMDNJ; improve the University's outstanding library system through computerization; and provide unrestricted endowment funds to support future research initiatives and address emerging health care needs.
- A key factor in our ability to become a world-class health sciences university will be our ability to attract world-class faculty. Here are some of the outstanding researchers who joined our faculty in 1986: Sidney Pestka, M.D., Chairman, Department of Molecular Genetics and Microbiology, UMDNJ-Robert Wood Johnson Medical School; Sheldon Miller, M.D., Chairman, Department of Psychiatry, UMDNJ-New Jersey Medical School; Masayori Inouye, M.D., Chairman, Department of Biochemistry, UMDNJ-Robert Wood Johnson Medical School; Gerson Weiss, M.D., Chairman, Department of Obstetrics and Gynecology, UMDNJ-New Jersey Medical School; and Frederick J. Humphrey, II, D.O., Professor of Psychiatry and Dean of

the UMDNJ-School of Osteopathic Medicine.

- In May, the University and its four core teaching hospitals announced formation of a nonprofit corporation to meet challenges of the increasingly competitive health care marketplace. The University Health System of New Jersey, Inc., will allow the University to organize statewide health care delivery systems in cooperation with the four hospitals: UMDNJ-University Hospital in Newark, Robert Wood Johnson University Hospital in New Brunswick, Cooper Hospital/University Medical Center in Camden, and Kennedy Memorial Hospitals-University Medical Center, with divisions in Stratford, Cherry Hill, and Washington Township.
- The University was involved in another incorporation in May, this one with Saint Barnabas Medical Center in Livingston. University Lithotripsy Affiliates, Inc., a not-for-profit corporation, will operate a $2 million lithotripter at UMDNJ-University Hospital, thereby serving the University's goal of reducing dependency on institutional care, by shortening the hospital stays of many kidney stone patients who otherwise would require surgery.
- University researchers published important papers that added to the body of knowledge on AIDS, and the Centers for Disease Control awarded a $2.5 million grant for a five-year study into the progression of the disease in children.
- All three campuses of the University were admitted to membership in the Children's Cancer Study Group, the oldest cooperative pediatric cancer study group in the nation.
- The cystic fibrosis center at UMDNJ-New Jersey Medical School in Newark was accredited as a Level III Cystic Fibrosis Center, the first center in the state to receive the highest designation from the National Cystic Fibrosis Foundation.
- The State Board of Higher Education demonstrated its continuing commitment to the strengthening of statewide medical education when it gave us approval to establish a unified, four-year UMDNJ-School of Osteopathic Medicine on a single campus in Stratford. The unification will eliminate the hardships of the current split-campus program, and serve to strengthen our allopathic programs as well, by eliminating the need for osteopathic and allopathic students to share facilities and curricula.

221st MSNJ ANNUAL MEETING
Americana Host Farm Resort
Lancaster, Pennsylvania

Wednesday, April 29, 1987

3:30 P.M.—Board of Trustees' Meeting

Thursday, April 30, 1987

9:00 A.M.—Registration Opens
9:00 A.M.—Message Center Opens
2:00 P.M.—House of Delegates
4:00 P.M.—Reference Committees

Friday, May 1, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
9:00 A.M.—House of Delegates (election)
12:00 NOON—Golden Merit Award Ceremony followed by Reception
2:30 P.M.—Reference Committees
5:00 P.M.—JEMPAC Political Forum
5:45 P.M.—JEMPAC Wine and Cheese Reception

Saturday, May 2, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
8:30 A.M.—House of Delegates
1:30 P.M.—House of Delegates
6:30 P.M.—Inaugural Reception followed by Inaugural Dinner

Sunday, May 3, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center Opens
8:30 A.M.—Program on one topic of major interest to the physician
1:00 P.M.—Board of Trustees' Meeting

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ALLERGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, clinical immunology. Solo or partnership. Available July 1987.

ANESTHESIOLOGY—Lee A. Balaklaw, M.D., 575 Easton Ave., Apt. 6M, Somerset, NJ 08873. Far Eastern University (Philippines) 1980. Board eligible. Group or partnership. Available July 1987.

Jeffrey Weinstein, M.D., 28 Park Ave., Cresskill, NJ 07626. Johns Hopkins 1983. Board eligible. Available July 1987.

DERMATOLOGY—Norman R. Friedman, M.D., 1736 Humphrey, Birmingham, MI 48008. SUNY-Upstate 1983. Board eligible. Partnership, solo, group. Available July 1987.

ENDOCRINOLOGY—John Hodge, M.D., Naval Hospital, Endocrine Branch, P.O. 566, San Diego, CA 02134. UMDNJ 1979. Board certified (IM). Board eligible (ENDOCRIN). Group with academic association. Available May 1987.

FAMILY MEDICINE—Roberto J. Irving, M.D., St. Mary Hospital, 308 Willow Ave., Hoboken, NJ 07030. Guadalajara 1985. Board eligible. Group or partnership. Available July 1987.

IMMUNOLOGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, allergy. Solo or partnership. Available July 1987.

INTERNAL MEDICINE—Thomas E. Jackson, M.D., 251-A Leveland Ln., Modesto, CA 95350. Guadalajara 1981. Board eligible. Group, partnership, solo. Available.

Joseph Minieri, M.D., 2200 Osborne 2nd River Rd., Point Pleasant, NJ

08742. Buenos Aires 1958. Board eligible. Solo. Available.

Harvey Mossman, M.D., 120 Marcellus Rd., #2U, Mineola, NY 11501. Med. Coll. of Pa. Board eligible. Group, partnership, solo. Available July 1987.

Michael F. Scharle, M.D., 1754 E. 2nd St., Long Beach, CA 90802. Guadalajara 1979. Also, pediatrics. Board eligible. Solo or partnership. Available.

John A. Stankoski, M.D., 10 Overlook Rd., Apt. 4H, Summit, NJ 07901. Bologna (Italy) 1984. Partnership, solo, group. Available July 1987.

Kevin E. Vitting, M.D., 100 East 77th St., New York, NY 10021. UMDNJ 1982. Also, nephrology. Board certified. Partnership or group. Available July 1987.

NEPHROLOGY—Kevin E. Vitting, M.D., 100 East 77th St., New York, NY 10021. UMDNJ 1982. Also, internal medicine. Board certified (IM). Partnership or group. Available July 1987.

OBSTETRICS/GYNECOLOGY—Rigoberto Cerda, M.D., 110 Font Martero St., Humacao, Puerto Rico 00661. Santo Domingo 1963. Board eligible.

Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. University of Texas 1983. Board eligible. Group or partnership. Available July 1987.

Michael Molina, M.D., 4 Howard Ct., Staten Island, NY 10310. Guadalajara 1981. Board eligible. Partnership. Available July 1987.

Michael A. Schiavone, M.D., 447 Linwood Ave., Buffalo, NY 14209. Pittsburgh 1982. Group, partnership, solo. Available July 1987.

Lee Anthony Tripp, M.D., 541 Brinton St., Philadelphia, PA 19144. Temple 1981. Board eligible. Solo or partnership. Available.

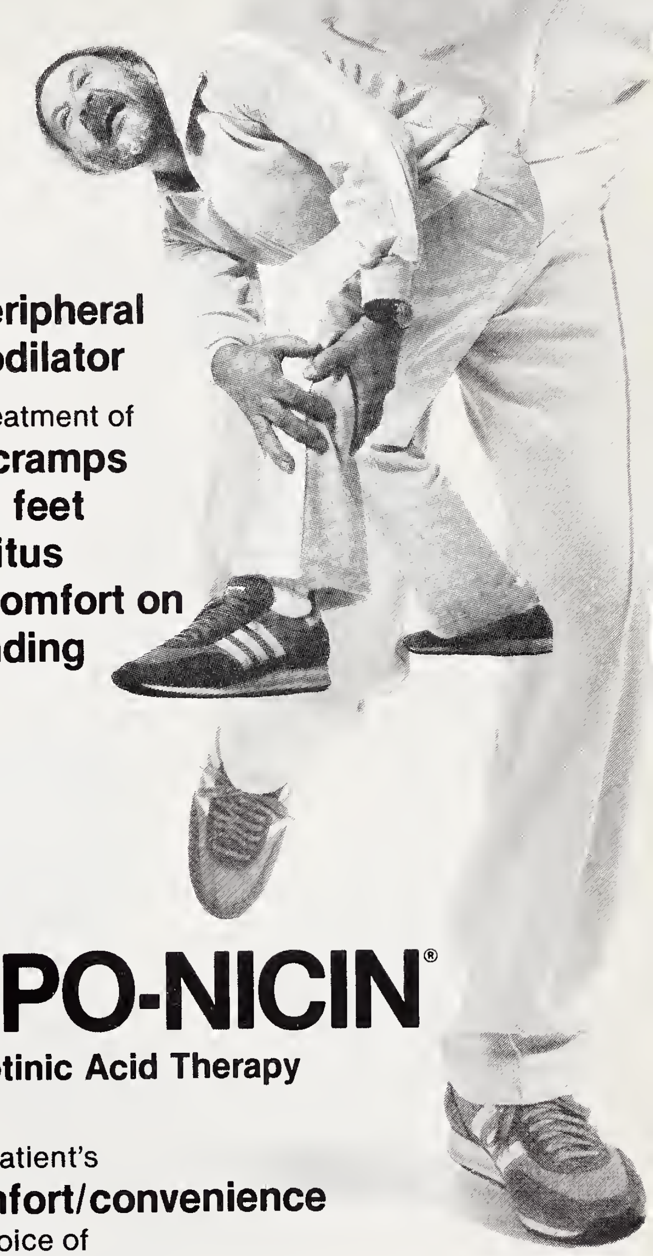
PEDIATRICS—A-salam Al-Hafidh, M.D., 2609 Featherstone Rd., #239, Oklahoma City, OK 73120. Baghdad Medical College 1976. Also, pediatric gastroenterology. Board eligible. Group, partnership, solo. Available July 1987.

RHEUMATOLOGY—Robert Lesser, M.D., 7560 Woodcrest Ave., Philadelphia, PA 19151. Chicago Medical 1982. Also, internal medicine. Board eligible. Board certified (IM). Group, partnership, hospital based. Available July 1987.

SURGERY—Patrick P. Montefusco, M.D., 4 Montfort Dr., Huntington, NY 11743. Georgetown 1977. Board certified. Partnership. Available.

Dorian J. Wilson, M.D., 28 Diana Dr., South Plainfield, NJ 07080. UMDNJ 1982. Board eligible. Hospital staff, medical school affiliate. Available July 1987.

UROLOGY—Steven E. Marks, M.D., 9207 Groundhog Dr., Richmond, VA 23235. Bowman Gray 1982. Board eligible. Group or partnership. Available.



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Ascorbic Acid	150 mg.
Thiamine HCL (B-1)	25 mg.
Riboflavin (B-2)	2 mg.
Pyridoxine HCL (B-6)	10 mg.

DOSE: 1 to 3 tablets daily.
AVAILABLE: Bottles of 100, 500.

LIPO-NICIN®/100 mg.

Each blue tablet contains:

Nicotinic Acid	100 mg.
Niacinamide	75 mg.
Ascorbic Acid	150 mg.
Thiamine HCL (B-1)	25 mg.
Riboflavin (B-2)	2 mg.
Pyridoxine HCL (B-6)	10 mg.

DOSE: 1 to 5 tablets daily.
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Indications: For use as a vasodilator in the symptoms of cold feet, leg cramps, dizziness, memory loss or tinnitus when associated with impaired peripheral circulation. Also provides concomitant administration of the listed vitamins. The warm tingling flush which may follow each dose of LIPO-NICIN® 100 mg. or 250 mg. is one of the therapeutic effects that often produce psychological benefits to the patient.

Side Effects: Transient flushing and feeling of warmth seldom require discontinuation of the drug. Transient headache, itching and tingling, skin rash, allergies and gastric disturbance may occur.

Contraindications: Patients with known idiosyncrasy to nicotinic acid or other components of the drug. Use with caution in pregnant patients and patients with glaucoma, severe diabetes, impaired liver function, peptic ulcers, and arterial bleeding.

Write for literature and samples

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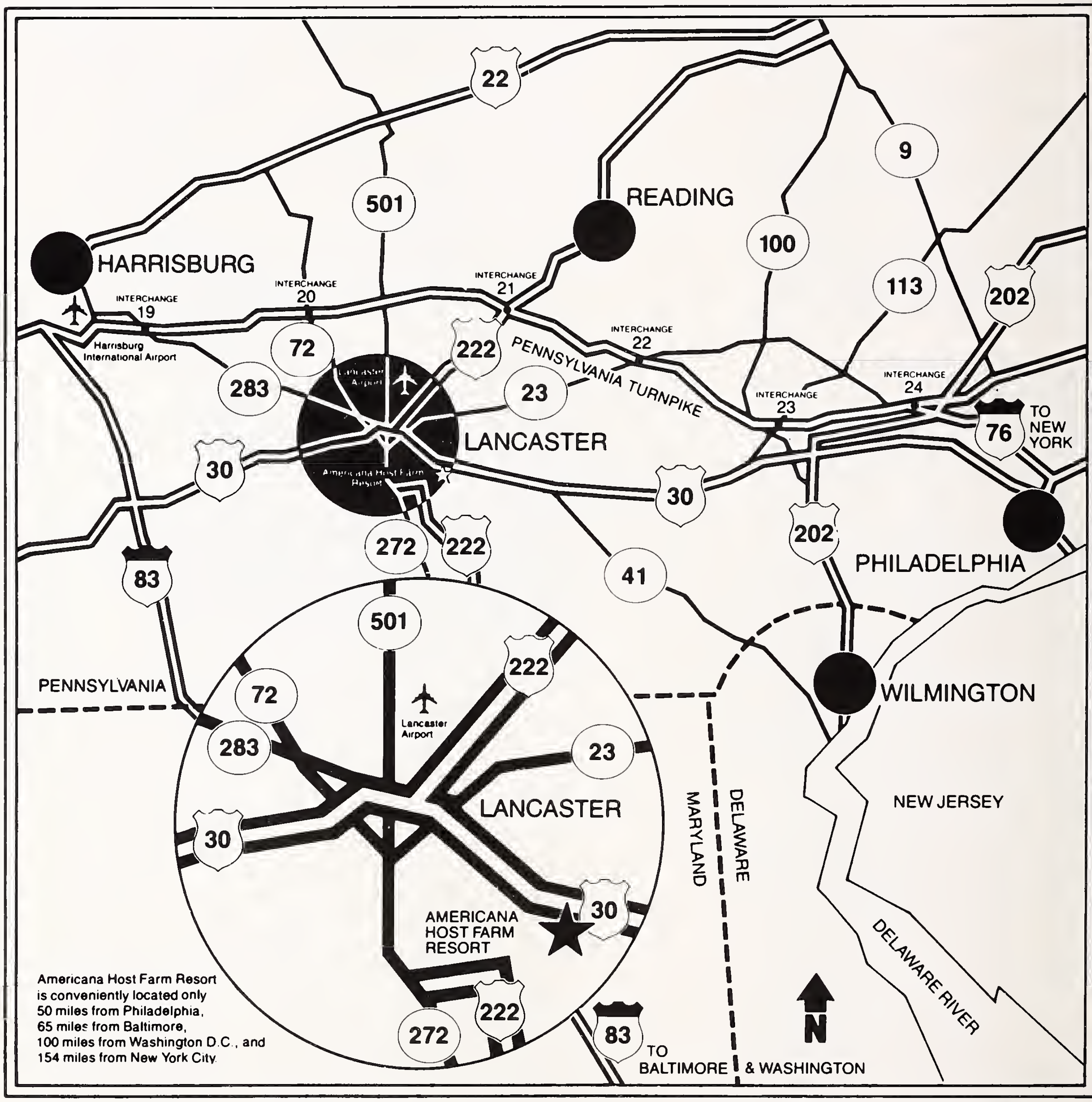
2500 West Sixth Street, Los Angeles, California 90057

REFER TO PDR

Americana Host Farm Resort

2300 Lincoln Highway East (Route 30), Lancaster, Pennsylvania 17602 (717) 299-5500



Americana Host Farm Resort is conveniently located only 50 miles from Philadelphia, 65 miles from Baltimore, 100 miles from Washington D.C., and 154 miles from New York City.

FROM NEW YORK

Take New Jersey Turnpike South to Pa. Turnpike. Take Pa Turnpike West to Interchange No. 21. Travel South on U.S. Rte. 222 to U.S. Route 30. Travel East on U.S. Route 30, approximately 5 miles to Americana Host Farm Resort.

FROM PITTSBURGH & POINTS WEST

Travel East on Pa. Turnpike to Int. 19. Go South on I-283 for 30 miles into Route 30 East for 6 miles to Americana Host Farm Resort.

FROM PHILADELPHIA

Take Pa. Turnpike West to Interchange No. 21. Travel South on U.S. Rte. 222 to U.S. Route 30. Travel East on U.S. Route 30, approximately 5 miles to Americana Host Farm Resort.

FROM BALTIMORE & WASHINGTON

Go North on Interstate Route 83 to York, Pa. Turn East on U.S. Route 30 for 32 miles to Americana Host Farm Resort.

BY AIR

Harrisburg International Airport (just 35 minutes from Host by limousine or car) via TWA and U.S. Air, and Lancaster Airport only minutes away with daily flights via U.S. Air.

BY RAILROAD

Amtrak to Lancaster Station. Taxi and Rent-a-Car Service available.

Americana Host Farm Resort

HOUSING APPLICATION
221st ANNUAL MEETING
THE MEDICAL SOCIETY OF NEW JERSEY

THURSDAY, APRIL 30, TO SUNDAY, MAY 3, 1987

HE FOLLOWING ARE ALL-INCLUSIVE PACKAGE PLANS BASED ON ODIFIED AMERICAN PLAN, INCLUDING DINNER AND BREAKFAST AILY STARTING WITH DINNER ON THE DAY OF ARRIVAL, THE SATRDAY NIGHT BANQUET, LIVE CABARET SHOWS EACH EVENING EATURING A DIFFERENT SHOW EVERY NIGHT, STATE SALES TAX, ND ALL GRATUITIES COVERING BELLMEN FOR IN/OUT LUGGAGE ERVICE, CHAMBERMAIDS, AND ALL MEAL SERVICE AS OUTLINED:

OUR-NIGHT PACKAGE

441.00 PER PERSON, SINGLE OCCUPANCY
326.85 PER PERSON, DOUBLE OCCUPANCY
144.00 PER CHILD SHARING A ROOM WITH PARENTS

HREE-NIGHT PACKAGE

345.00 PER PERSON, SINGLE OCCUPANCY
255.00 PER PERSON, DOUBLE OCCUPANCY
108.00 PER CHILD SHARING A ROOM WITH PARENTS

WO-NIGHT PACKAGE

249.00 PER PERSON, SINGLE OCCUPANCY
183.65 PER PERSON, DOUBLE OCCUPANCY
72.00 PER CHILD SHARING A ROOM WITH PARENTS

- Forms received after April 1, 1987, will be confirmed on an "if available" basis.
- Fill out only one form for each room required.
- DEPOSIT OF $100 PER ROOM MUST ACCOMPANY FORM TO CONFIRM RESERVATIONS.
- Please make check payable to HOST FARM. Major credit cards accepted at hotel, but not for deposit.
- Hotel confirmation is required for check-in.
- Send form and deposit to:

Host Reservations
2300 Lincoln Highway East
Lancaster, PA 17602
717-299-5500

HECK TYPE OF ROOM REQUIRED: ☐ SINGLE OCCUPANCY ☐ DOUBLE OCCUPANCY

LEASE NOTE: Number of persons attending the Inaugural Dinner-Dance honoring President-Elect and Mrs. Harry M. Carnes on Saturday, May 2, 1987 ______

LEASE PRINT OR TYPE THE FOLLOWING INFORMATION:

AME: ______ NO. of CHILDREN: ______
HARING ROOM WITH: ______ CHILDREN'S AGES: ______

DDRESS: ______
ITY: ______ STATE: ______ ZIP: ______
USINESS PHONE NO. ______ HOME PHONE NO. ______
HECK IF OFFICIAL DELEGATE ☐ COUNTY: ______
RRIVAL DATE ______ DAY ______
EPARTURE DATE ______ DAY ______

CHECK-IN: AFTER 4 PM
CHECK-OUT: BY 12 NOON

MEDICAL SOCIETY OF NEW JERSEY—221st ANNUAL MEETING

#13242

ANNUAL CME ASSEMBLY

presented by the

MEDICAL SOCIETY OF THE
STATE OF NEW YORK

Clinical Dilemmas &
Controversies

MARCH 13-15, 1987
THE NEW YORK HILTON, NEW YORK CITY

■

HIGHLIGHTS . . . .

20 CME Sessions; Panel Discussions; 70 Technical Exhibits; two Receptions; President's Dinner Dance.

Registration: There is no fee for members of the New Jersey State Medical Society, residents, medical students, or medical assistants. Non-member physicians—$50; Allied Professions $10. We are accredited by the Accreditation Council for CME.

■

For a copy of the preliminary program, contact: MSSNY, 420 Lakeville Road, P.O. Box 5404, Lake Success, N.Y. 11042.
Attn: Division of Meeting Services

(516) 488-6100

ASSOCIATES IN SEX AND MARITAL THERAPY

• • •

Richard M. Samuels, Ph.D.
Diplomate, ABPP, Fellow, A.P.A.
Clinical Instructor, Dept. OB/GYN
New Jersey Medical School

•

Daniel N. Watter, Ed.D.
Board Certified Sexologist, ACS
Clinical Member, AAMFT

•

Martha Calderwood, M.A.
Deputy Director of Education,
Human Sexuality Program, Dept. OB/GYN
New Jersey Medical School

• • •

Professional Membership:
Impotence Institute of America
Organizational Membership:
AASECT

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Specializing in Sex & Marital Therapy

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THE LIKOFF CARDIOVASCULAR INSTITUTE
and
THE DIVISION OF CARDIOLOGY
HAHNEMANN UNIVERSITY
PRESENT

CARDIOLOGY TODAY

January 28, 1987

"The Assessment of Cardiac Patients Undergoing Non-Cardiac Surgical Procedures"

MODERATOR: RONALD S. PENNOCK, M.D.

4:00 PM	EKG, Holter	*Gary J. Anderson, M.D.*
4:30 PM	IMAGING	*Gary S. Mintz, M.D.*
5:00 PM	PRE-OP MANAGEMENT	*Ronald S. Pennock, M.D.*
5:30 PM	INTRA AND POST OPERATIVE MANAGEMENT	*Joseph Carver, M.D.*

Designed for the physician in practice faced with the care of critically ill patients.
CME CATEGORY I CREDITS CERTIFIED • NO REGISTRATION FEE REQUIRED
Conferences are held in Lecture Hall "A"
Second Floor—New College Building
Hahnemann University, 15th and Vine Streets, Philadelphia, PA 19102

CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

This list is compiled through the cooperation of the Committee on Medical Education of the Medical Society of New Jersey, The Academy of Medicine of New Jersey, the New Jersey Chapter of the American Academy of Family Physicians, and the Office of Continuing Medical Education of the UMDNJ. For information on accreditation, please contact the sponsoring organization(s), indicated by italics—last line of each item.

ANESTHESIOLOGY

February

7 **Clinical Anesthesia: 1987**
8 A.M.-4 P.M.—NJ Medical School, Med. Science Bldg., Newark
(UMDNJ)

11 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson Medical School, Rm. 593, New Brunswick
(UMDNJ)

March

11 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson Medical School, Rm. 593, New Brunswick
(UMDNJ)

13 **28th Annual Postgraduate**
14 **Anesthesiologists Seminar**
15 The Hyatt, Cherry Hill
(NJ State Society of Anesthesiologists and AMNJ)

CARDIOLOGY

February

26 **Thromboembolis-Thrombolytic Therapy**
11:30 A.M.-12:30 P.M.—Christ Hospital, Jersey City
(AMNJ)

March

10 **Pathophysiology and Treatment of Acute Congestive Heart Failure**
9-10 A.M.—Holy Name Hospital, Teaneck
(Holy Name Hospital and AMNJ)

13 **The LRC Coronary Prevention Trial and Its Implications**
20 **Anticoagulants in Heart Disease**
8:30 A.M.—United Hospitals Medical Center, Annex. Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

14 **Cardiac Rehabilitation**
8-9 A.M.—Newcomb Medical Center, Vineland
(AMNJ)

26 **Silent Myocardial Ischemia**
11 A.M.-12 noon—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

MEDICINE

February

2 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Center, Rm. 393, New Brunswick
(UMDNJ)

3 **Anaerobic Infections**
17 **Septic Shock**
8:30 A.M.—Palisades General Hospital, North Bergen
(Palisades General Hospital and AMNJ)

4 **UTI**
10:30-11:30 A.M.—St. Mary's Hospital, Passaic
(AMNJ)

4 **Medical Grand Rounds**
11:30 A.M.-1 P.M.—VA Medical Center, East Orange
(Endocrine Section, AMNJ)

4 **Abstract Presentation**
2-5 P.M.—Morristown Memorial Hospital
(NJ Gastroenterological Society and AMNJ)

4 **Fluid and Electrolyte Imbalance**
1:30 P.M.—Essex County Hospital Center, Cedar Grove
(Essex County Hospital Center and AMNJ)

4 **Dinner Meeting**
6-9:30 P.M.—Holiday Inn, Newark Airport
(Endocrine Section, AMNJ)

4 **Pathogenesis of Systemic Sclerosis and Related Disorders**
11 **Pathogenesis of Bronchial Asthma**
25 **New Perspectives on Pharmacological Therapy for Obesity**
12 noon-1 P.M.—Robert Wood Johnson Medical School, Med. Educ. Bldg., Rm. 102, New Brunswick
(UMDNJ)

4 **Update on Immunizations at Home and Abroad**
11 **Update on the Treatment of Large Cell Lymphoma**
18 **Oncology Update**
25 **Special Problems with Platelets**
8:30-10:30 A.M.—Grassmann Hall, Alexian Brothers Hospital, Elizabeth
(Alexian Brothers Hospital and AMNJ)

4 **Medical Lecture Series**
11 10:30 A.M.-12 noon—Christ
18 Hospital, Jersey City
25 *(Christ Hospital and AMNJ)*

4 **Endocrine Conferences**
11 3:30-5 P.M.—Rotates between
18 Newark Beth Israel Medical Center,
25 United Hospitals, University Hospital, Newark, and VA Medical Center, East Orange
(Endocrine Section, AMNJ)

6 **Diet and Prescription of Hyperlipidemia**
12 noon—St. Mary's Hospital, Orange
(St. Mary's Hospital and AMNJ)

6 **Department of Medicine Grand**
20 **Rounds**
9-10 A.M.—Crean Hall, St. Francis Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

6 **Multidisciplinary Cancer**
13 **Conferences**
20 11 A.M.—12 noon—Wallkill Valley
27 General Hospital Annex, Sussex
(Wallkill Valley General Hospital and AMNJ)

6 **Cancer of the Bladder and Prostate**
13 **Parkinsonism**
20 **Management of Decubitis Ulcers**
27 **Review of Recent Decisions on Terminal Care**
12 noon—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

9 **Thyroid Diseases**
7 P.M.—Wallkill Valley General Hospital, Sussex
(Wallkill Valley General Hospital and AMNJ)

10 **Industrial Medicine—Chemicals and Health**
12 noon-1 P.M.—The Hospital Center at Orange
(AMNJ)

10 **Renal Biopsy Conferences**
12:30-2 P.M.—Barnert Memorial Hospital, Paterson
(Barnert Memorial Hospital and AMNJ)

10 **Dermatology Program**
8-10 P.M.—Schering Corporation, Kenilworth
(NJ Dermatological Society and AMNJ)

11 **Albert Siegel Memorial Symposium**
2-5 P.M.—St. Barnabas Medical Center, Livingston
(NJ Gastroenterological Society and AMNJ)

12 **Cartilaginous Changes in Osteoarthritis and Rheumatoid Arthritis: Clinical Implications**
11 A.M.-12 noon—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

12 **AIDS Symposium: Six Years After the First Reported Cases in the United States**
Gibraltar Institute for Research

THE PHILADELPHIA HEART INSTITUTE

of Presbyterian-University of Pennsylvania Medical Center

CARDIOLOGY UPDATE . . .

is designed for the Physician and provides an intensive survey of the current status of Clinical Cardiology . . .

WEDNESDAY
FEBRUARY 4, 1987
3:00 to 5:30 PM

DIAGNOSIS AND MANAGEMENT OF HYPERTENSION

MODERATOR: BERNARD SEGAL, M.D.

Risk Factors and Natural History	*Lloyd Klein, M.D.*
Case Presentations	*Charles Cummings, M.D.*
Old and New Antihypertensive Drugs	*Robert Stote, M.D.*
Diagnosis and Treatment of Renovascular Hypertension	*Allan Schwartz, M.D.*
Questions and Answers	*The Audience*

- No Registration Fee
- No Advance Registration Required
- CME Credits*

* * *Wine and Cheese Served Following Each Session* * *

Scheie Eye Institute Auditorium
Presbyterian-University of Pennsylvania
Medical Center
39th and Market Streets
Philadelphia, Pennsylvania

Parking Available (at discount rate.)

*The University of Pennsylvania School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing education for physicians. The University of Pennsylvania School of Medicine designates this continuing medical activity for 22.5 credit hours of Category I of the Physicians Recognition Award of the AMA (2.5 credit hours each lecture).

and Training
(AMNJ)

13 **Alzheimer's**
9-10 A.M.—Memorial General Hospital, Union
(NJ Departments of Health and Community Affairs and AMNJ)

13 **Alzheimer's**
11:30 A.M.-12:30 P.M.—Overlook Hospital, Summit
(NJ Departments of Health and Community Affairs and AMNJ)

13 **AIDS**
12 noon-1 P.M.—Freehold Area Hospital
(NJ Department of Health and AMNJ)

17 **Septic Shock**
8:30 A.M.-9:30 A.M.—Palisades General Hospital, North Bergen
(Palisades General Hospital and AMNJ)

17 **Continuous Ambulatory Peritoneal Dialysis**
12 noon-1 P.M.—St. Mary's Hospital, Orange
(St. Mary's Hospital and AMNJ)

17 **Blood-Membrane Interactions in Hemodialysis**
4-5 P.M.—Robert Wood Johnson Medical School, Rm. 393, New Brunswick
(UMDNJ)

18 **Dermatology Conferences**
6-9 P.M.—Rutgers Community Health Plan, U.S. Hwy. 1, New Brunswick
(Rutgers Community Health Plan and AMNJ)

18 **Regional Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson Medical School, Rm. 108B, New Brunswick
(UMDNJ)

19 **Current Progress in the Management of Certain States of Prostatic Carcinoma**
5-6:30 P.M.—Somerset Medical Center, Somerville
(Somerset Medical Center and AMNJ)

20 **Current Chemotherapy**
9 A.M.—St. Francis Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

20 **Vaccines and Immunizations: Hepatitis, Tetanus, Toxoid, Pneumovax**
10:45 A.M.—Greystone Park Psychiatric Hospital
(Greystone Park Psychiatric Hospital and AMNJ)

20 **Thrombolytic Agents**
27 **Medical Mortality Conferences**
8:30 A.M.—United Hospitals Medical Center, Annex Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

24 **Management of the Child and Adolescent with Diabetes Mellitus**
8:30-10:30 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

24 **Alzheimer's**
12 noon-1 P.M.—Hospital Center at Orange
(NJ Departments of Health and Community Affairs and AMNJ)

March

2 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Center, Rm. 393, New Brunswick
(UMDNJ)

3 **Chemicals and Health**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

4 **Medical Grand Rounds**
11:30 A.M.-1 P.M.—VA Medical Center, East Orange
(Endocrine Section, AMNJ)

4 **Dinner Meeting**
6-9:30 P.M.—Holiday Inn, Newark Airport
(Endocrine Section, AMNJ)

4 **8th Annual Statewide Tumor Board Conference Dinner**
6 P.M.—MSNJ Executive Offices, Lawrenceville
(Oncology Society of NJ and AMNJ)

4 **Dermatology I**
11 **Dermatology II**
18 **Dermatology III**
25 **Allergy/Immunology I**
8:30-10:30 A.M.—Alexian Brothers Hospital, Grassman Hall, Elizabeth
(Alexian Brothers Hospital and AMNJ)

4 **Medical Lecture Series**
11 10:30 A.M.-12 noon—Christ
18 Hospital, Jersey City
25 *(Christ Hospital and AMNJ)*

4 **Biliary Tract, Which Test is Best?**
11 **To Be Announced**
18 **Diuretics: Sailing Between Scylla and Charybdis**
25 **Lipids, Silent Ischemia and the Hot Reactors**
12 noon-1 P.M.—Robert Wood Johnson Medical School, Med. Educ. Bldg., Rm. 102, New Brunswick
(UMDNJ)

4 **Endocrine Conferences**
11 3:30-5 P.M.—Rotates between
18 Newark Beth Israel Medical Center,
25 United Hospital, University Hospital, Newark, and VA Medical Center, East Orange
(Endocrine Section, AMNJ)

5 **Recent Advances in Vitamin Metabolism**

DAILY SCHEDULE
221st MSNJ ANNUAL MEETING
Americana Host Farm Resort
Lancaster, Pennsylvania

Wednesday, April 29, 1987
3:30 P.M.—Board of Trustees' Meeting

Thursday, April 30, 1987
9:00 A.M.—Registration Opens
9:00 A.M.—Message Center Opens
2:00 P.M.—House of Delegates
4:00 P.M.—Reference Committees

Friday, May 1, 1987
8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
9:00 A.M.—House of Delegates (election)
12:00 NOON—Golden Merit Award Ceremony followed by Reception
2:30 P.M.—Reference Committees
5:00 P.M.—JEMPAC Political Forum
5:45 P.M.—JEMPAC Wine and Cheese Reception

Saturday, May 2, 1987
8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
8:30 A.M.—House of Delegates
1:30 P.M.—House of Delegates
6:30 P.M.—Inaugural Reception followed by Inaugural Dinner

Sunday, May 3, 1987
8:00 A.M.—Registration Opens
8:00 A.M.—Message Center Opens
8:30 A.M.—Program on one topic of major interest to the physician
1:00 P.M.—Board of Trustees' Meeting

JEFFERSON MEDICAL COLLEGE
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THE DEPARTMENT OF SURGERY
AND THE OFFICE OF
CONTINUING MEDICAL EDUCATION

present

CURRENT ISSUES IN MORBID OBESITY

at

The Barclay Hotel
Philadelphia, Pennsylvania
Thursday, March 12, 1987

This is a multi-disciplinary program designed to provide insight into the consequences of morbid obesity. The program will provide physicians with a better appreciation and understanding of the current medical, surgical, and psychological treatment of morbid obesity, and will include considerations of history, techniques, and biological aspects of the problem.

- limited to 125 participants
- 6 credit hours in Category 1

For information regarding registration call:
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(215) 928-6992

For information regarding course content call:
James E. Colberg, M.D., Course Director
Jerome J. Vernick, M.D., Course Director
(215) 928-6925

tear out and mail to:
Current Issues in Morbid Obesity
Jefferson Medical College
Office of Continuing Medical Education
1025 Walnut Street—Room G-3
Philadelphia, PA 19107

Name ____________________________
Address ____________________________
City ____________________________
State ______________ Zip Code ________

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THE OFFICE OF
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present

ADVANCED LASER FOR HEAD AND NECK SURGERY

at

The Hyatt Regency Hilton Head
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March 25-28, 1987

Anesthesiologists
and
Otolaryngologists

- limited to 75 participants
- 16 credit hours in Category 1
- participation includes four (4) half day sessions
- fee: $500.00

Registration fee includes course syllabus, continental breakfast, coffee break and evening reception.

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For information regarding course content call:
Louis D. Lowry, M.D., Program Director
(215) 928-6784

tear out and mail to
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Jefferson Medical College
Office of Continuing Medical Education
1025 Walnut Street—Room G-3
Philadelphia, PA 19107

Name ____________________________
Address ____________________________
City ____________________________
State ______________ Zip Code ________

I am interested in attending the course at Hilton Head

9 A.M.–United Hospitals Medical Center, Annex Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

6 **Current Prescription of Asthma**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

6 **Department of Medicine Grand**
20 **Rounds**
9-10 A.M.–Crean Hall, St. Francis Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

6 **Diabetes**
13 **Silent Coronary**
20 **Minimum Inhibitory**
27 **Concentrations and Antibiotic Sensitivity**
Update on Oncology
12 noon—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

6 **Current Prescription of Asthma**
17 **Ventilatory Failure**
12 noon—St. Mary's Hospital, Orange
(St. Mary's Hospital and AMNJ)

10 **Can Cancer Be Prevented?**
12 noon—West Jersey Hospital, Camden Division
(AMNJ)

10 **Hyperalimentation**
12 noon-1 P.M.–The Hospital Center at Orange
(AMNJ)

10 **Renal Biopsy Conferences**
12:30-2 P.M.–Barnert Memorial Hospital Center, Paterson
(Barnert Memorial Hospital and AMNJ)

10 **Dermatology Program**
8-10 P.M.–Schering Corp., Kenilworth
(NJ Dermatological Society and AMNJ)

11 **Adrenal Diseases**
10:30-11:30 A.M.–St. Mary's Hospital, Passaic
(AMNJ)

11 **Pharyngitis: Approaches—1986-1987**
1:30-2:30 P.M.–Essex County Hospital Center, Cedar Grove
(AMNJ)

11 **To Be Announced**
2-5 P.M.–St. Barnabas Medical Center, Livingston
(NJ Society for Gastrointestinal Endoscopy and AMNJ)

12 **Adrenal Diseases**
11 A.M.–St. Joseph's Hospital and Medical Center, Paterson
(AMNJ)

13 **Alzheimer's**
12 noon-1 P.M.–Freehold Area Hospital
(NJ Departments of Health and Community Affairs and AMNJ)

17 **Newer Approaches to Hyponatremia**
4-5 P.M.–Robert Wood Johnson Medical School, Rm. 383, New Brunswick
(UMDNJ)

17 **Nephrotoxicity of Common Drugs**
8:30 A.M.–Palisades General Hospital, North Bergen
(AMNJ)

17 **Preventing Progressive Renal Disease**
6:30 P.M.–
(Nephrology Society of NJ and AMNJ)

18 **Anaerobic Infections**
9 A.M.–Warren Hospital, Phillipsburg
(AMNJ)

18 **Renal Urology Rounds**
7-8:30 A.M.–Robert Wood Johnson Medical School, Rm. 108B, New Brunswick
(UMDNJ)

18 **Dermatology Conferences**
6-9 P.M.–Rutgers Community Health Plan, U.S. Hwy. 1, New Brunswick
(Rutgers Community Health Plan and AMNJ)

19 **Antibiotics: Proper Use of**
2 P.M.–John E. Runnells Hospital, Berkeley Heights
(AMNJ)

19 **New Update in Treating Infections in the Geriatric Patient**
5-6:30 P.M.–Somerset Medical Center, Somerville
(Somerset Medical Center and AMNJ)

20 **Indications for Invasive Studies**
9 A.M.–St. Francis Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

27 **Medical Mortality Conference**
8:30 A.M.–United Hospitals Medical Center, Annex. Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

NEUROLOGY/PSYCHIATRY

February

5 **Neurology Grand Rounds**
12 3-5 P.M.–Med. Educ. Bldg., Rm.
19 108A, Robert Wood Johnson
26 Medical School, New Brunswick
(UMDNJ)

5 **Case Seminars and Supervision**
19 **To Improve Psychotherapeutic Technique**
8-10 P.M.–312 Harding Dr., So. Orange
(Advanced Psychiatric Study Group and AMNJ)

6 **New Developments in Alzheimer's Disease**
8:30 A.M.–United Hospitals Medical Center, Annex Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

11 **Multimodal Therapy**
8:30-10 A.M.–Elizabeth General Medical Center
(Elizabeth General Medical Center)

19 **AIDS**
3-4 P.M.–Ancora Psychiatric Hospital
(AMNJ)

March

4 **Deinstitutionalization/Management Issues of Chronic Patients**
8:30-10 A.M.–Elizabeth General Medical Center
(Elizabeth General Medical Center)

5 **Case Seminars and Supervision**
19 **To Improve Psychotherapeutic Technique**
8-10 P.M.–312 Harding Dr., So. Orange
(Advanced Psychiatric Study Group and AMNJ)

ARE YOU MOVING?

If so, please send a change of address to *NEW JERSEY MEDICINE,* Medical Society of New Jersey, Two Princess Road, Lawrenceville, NJ 08648, at least six weeks before you move.

Name ______________________________

Address ______________________________

City ________________ State ________ Zip ________

County ______________________________

March-October 1987 Tues. Eves. 4-7 p.m.

EMERGENCY MEDICINE BOARD REVIEW #312

NYU Medical Center

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5 **Neurology Grand Rounds**
12 3-5 P.M.—Robert Wood Johnson
19 Medical School, Med. Educ. Bldg.
26 Rm. 108A, New Brunswick
(UMDNJ-Robert Wood Johnson Medical School)

20 **Temporal Lobe Epilepsy**
10:45 A.M.—Greystone Park Psychiatric Hospital
(Greystone Park Psychiatric Hospital and AMNJ)

OBSTETRICS/GYNECOLOGY

February

13 **Treatment of Prolactinomas**
8:30 A.M.—United Hospitals Medical Center, Annex Aud., Rms. B and C, Newark
(United Hospitals Medical Center and AMNJ)

March

24 **Obstetrics Update**
8-10 P.M.—The Englewood Club
(Englewood Surgical Society and AMNJ)

27 **Semmelweis-Waters Obstetrical**
28 **and Gynecological Conference**
29 Resorts International Hotel, Atlantic City
(UMDNJ)

PEDIATRICS

February

13 **Immunotherapy of Neonatal Sepsis**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

21 **Toxicology/Pharmacology—Pediatrics**
8-9 A.M.—Newcomb Medical Center, Vineland
(AMNJ)

March

3 **Smoothing the Road Home for the Child with Bronchopulmonary Dysplasia**
8 A.M.-3 P.M.—Woodbridge Hilton, Iselin
(Children's Specialized Hospital and AMNJ)

13 **Recent Advances in Immunology and Immunotherapy**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

24 **Enhancing the Effectiveness of Health Education**
8:30-10:30 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

RADIOLOGY

February

4 **Current Developments in Diagnostic Imaging of Value to the Practicing Physician**
8 A.M.-12:15 P.M.—Somerset Medical Center, Somerville
(Somerset Medical Center and AMNJ)

5 **Molecular Medicine Lecture**
12 **Series**
19 4-6 P.M.—Coriell Institute for
26 Medical Research, Copewood St., Camden
(Institute for Medical Research and AMNJ)

19 **Monthly Meeting**
7:30 P.M.—Saint Barnabas Medical Center, Livingston
(Radiological Society of NJ and AMNJ)

26 **Visiting Professor Program**
1:30 P.M.—Saint Barnabas Medical Center, Livingston
(Saint Barnabas Medical Center and AMNJ)

26 **Radiology—Ultrasound**
11 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center and AMNJ)

March

5 **Molecular Medicine Lecture**
12 **Series**
19 4-6 P.M.—Coriell Institute for
26 Medical Research, Copewood St., Camden
(Institute for Medical Research and AMNJ)

19 **Monthly Meeting**
7:30 P.M.—Saint Barnabas Medical Center, Livingston
(Radiological Society of NJ and AMNJ)

21 **Medical and Legal Issues in Diagnostic Ultrasound: Emphasis on Obstetrics and Gynecology**
8 A.M.-4 P.M.—Robert Wood Johnson Medical School, New Brunswick
(NJ Institute of Ultrasound in Medicine and AMNJ)

26 **Visiting Professor Program**
1:30 P.M.—Saint Barnabas Medical Center, Livingston
(Saint Barnabas Medical Center and AMNJ)

SURGERY

February

3 **Surgery: Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Room 102, New Brunswick
(UMDNJ)

4 **Surgical Grand Rounds**
11 8:30-10 A.M.—Robert Wood Johnson
18 Medical School, Room 102,
25 New Brunswick
(UMDNJ)

11 **High-Risk Surgery**
10:30-11:30 A.M.—St. Mary's Hospital, Passaic
(AMNJ)

12 **Surgical Management of Benign and Malignant Disease of the Breast**
7:30-8:30 A.M.—West Jersey Health System, Eastern Division, Voorhees
(West Jersey Health System and AMNJ)

24 **Microsurgical Limb Salvage**
8-10 P.M.—Englewood Club, Englewood
(The Englewood Surgical Society and AMNJ)

March

3 **Surgery: Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Rm. 102, New Brunswick
(UMDNJ)

4 **Surgical Grand Rounds**
11 8:30-10 A.M.—Robert Wood Johnson
18 Medical School, Rm. 102,
25 New Brunswick
(UMDNJ)

11 **Meeting of NJ Society of Colon and Rectal Surgeons**
6:30 P.M.—The Manor, West Orange
(NJ Society of Colon and Rectal Surgeons and AMNJ)

24 **Obstetrics Update**
8-10 P.M.—The Englewood Club
(Englewood Surgical Society and AMNJ)

SURGICAL SPECIALTIES

February

5 **Vascular Surgery Conference**
12 **Rounds**
19 4-5 P.M.—Robert Wood Johnson
26 Medical School, Med. Educ. Bldg., New Brunswick
(UMDNJ)

March

5 **Vascular Surgery Conference**
12 **Rounds**
19 4-5 P.M.—Robert Wood Johnson
26 Medical School, Med. Educ. Bldg., New Brunswick
(UMDNJ)

MISCELLANEOUS

February

4 **Medicare—Past, Present, and Future**
6:30 P.M.—Holiday Inn, Monroe
(Urology Section, AMNJ)

March

9 **Malpractice**
7 P.M.—Wallkill Valley General Hospital, Sussex
(AMNJ)

LETTERS TO THE EDITOR

Medical Records

October 8, 1986

Dear Dr. Krosnick:

The October 1986 issue focusing on medical records proved most interesting. I would suggest, however, that the optimum beneficiary these days is the PRO which judges a patient's welfare and quality of care completely on the basis of the medical record. This makes the patient come out a poor third in the lottery.

However, the subject of medical records should not ignore the fact that the New Jersey Board of Nurses refuses to require nurses to document lapses in nursing care to hospitalized patients. Thus, medication doses that are missed, meals that are missed, excessive stays in x-ray, or patients lying in their own swill for hours do not have to be documented or explained. Yet each of these may compromise patient care for which the doctor may be blamed. If, for example, a patient in gram negative sepsis arrives, and the doctor writes for an aminoglycoside which is not delivered for eight hours because the order failed to get to the pharmacy on time, these details will not be found on the chart.

I had a case where I discontinued saline. The nurse for reasons known only to herself substituted distilled water and drowned the patient. When the nursing board, upset at the disclosure, sent two investigators to my office, I referred them to the hospital, where, as far as I know, the case could not be reconstructed.

I think the membership should think hard about this issue, and urge the nursing board to require that such lapses be documented, so that the doctors, held accountable for patient care, will be able to reconstruct records in conflicts with PRO on quality care, as well as in litigations.

(signed) Charles Harris, M.D.

October 16, 1986

Dear Dr. Krosnick:

I was pleased to see the subject of medical records as the cover story in the October issue of *NEW JERSEY MEDICINE*. At the Medical Board, we long have been concerned with the issue of inadequate records. Hopefully, physicians will be more aware of the extreme importance of not only practicing good medicine but properly recording that practice.

Physicians must be reminded that in today's mobile society, their medical records in many cases will be depended upon by other health care providers. They should prepare their records so that not only are they complete but they also are sufficiently clear so they can be utilized by other physicians who may be called upon to serve the patient.

Recently, we have received a number of complaints concerning the issue of confidentiality of the medical record. This most often involves issues concerning private industry and insurance companies. Therefore, a new Medical Records Rule is in draft stage and soon will be presented to the full Board.

(signed) Michael B. Grossman, D.O.
Secretary, New Jersey State
Board of Medical Examiners

Annual Review of Neuroscience; Clinical Radiology of the Spine and Spinal Cord; Ear, Nose and Throat Disorders in Children; The Frontal Lobes; Pediatric Magnetic Resonance Imaging; Radiology of the Hand; Radiology of the Kidney

Annual Review of Neuroscience Volume 9—1986

W. Maxwell Cowan (ed). Palo Alto, CA, Annual Reviews, Inc., 1986. Pp. 531. Illustrated ($31)

This is not a book for the casual reader to buy but it is one to take down from the library shelf for an update. It is exciting to read in simplified language what the neuroscientists and researchers have been doing from the 1970s to January 1985 and the challenges that remain. One can omit the technical formulae (mathematical and chemical) and still glean a clear insight into the subjects covered. References abstracted are complete, but subjects covered are by no means the full field. However, suggestions for further reading are offered. Introductions and summaries of each subject include the theory. The proofs are to be found in the chapter and complete references. There is no cohesiveness between the chapters. Relationships to other fields constantly are pointed out. The best chapter concerns basal ganglia circuits in primates. Others include artificial intelligence and the brain, dealing with the visual system, receptor mapping by autoradiography and other methods, NMR of brain metabolism in vivo, cyclic GMP cascade of vision, insect olfactory receptors (both chemical and electrical), behavioral and developmental aspects of arm movements, histamine as a neuroregulator, genetics of mutations that alter electrical excitability in the nervous system of the fruit fly, neuropeptide synthesis and function of the brain and how they can be changed by many CNS-acting drugs or behavioral paradigms, Schwann cell function, acetylcholine receptor and neuropeptide inactivation, invertebrate learning and memory, and, best of all, new perspectives on Alzheimer's disease.

Don't be scared by the chapter titles. The book is worth your effort.

Henry R. Liss, M.D.

Clinical Radiology of the Spine and the Spinal Cord

Mohamed M. Banna. Rockville, MD, Aspen Systems, 1985. Pp. 449. ($78)

Unlike the authors of some previous monographs, Dr. Banna uses a multi-imaging approach to the review of the diseases of the spine and spinal cord. However, the MRI of the spine is discussed separately.

Opening with a review of the anatomy of the spine, the book proceeds to a chapter on embryology. A chapter, "Myelography and CT," was well written but perhaps a bit short considering the role of CT in neuroradiology.

Among the remaining chapters, a broad review of topics discussed include trauma, neoplasms, and degenerative disease. A chapter on MRI contains an introduction to the physics along with a general essay on that topic. The illustrations provided, good quality radiographs and scans, are informative.

This very well-written book is recommended to the physician who wishes a good overview of the field.

Neil B. Horner, M.D.

Ear, Nose and Throat Disorders in Children

John E. Bordley, M.D., Patrick E. Brookhouser, M.D., Gabriel F. Tucker, Jr., M.D., (eds). New York, NY, Raven Press, 1986. Pp. 446. Illustrated. ($47.50)

This text is a compact reference book covering disorders and diseases of the ears, nose, and throat in children. It has been directed primarily towards pediatricians, family physicians, residents, and medical students. However, the busy practicing otolaryngologist might find the volume useful as a quick and convenient reference source in pediatric otolaryngology.

Emphasis has been placed on basic disease mechanisms. Embryology, anatomy, and physiology are presented as they relate to the clinical examination. The history, diagnostic symptoms, physical findings, pathologic changes, and the usual clinical course are correlated with diseases and disorders of the ears, nose, and throat in children.

Therapeutic measures including surgery are mentioned in order to assist the nonotolaryngologist in determining when to obtain a consultation with or a referral to an otolaryngologist rather than to help make the pediatrician or the family physician proficient in therapy. With this material, the nonspecialist is offered a practical clinical guide. The book also may help the pediatrician discuss the matter with the patient and with the family.

A bibliography of pertinent articles appears at the end of each chapter serving as a useful reference for further reading and study. Although elementary and not all-inclusive, its compactness combined with its relative completeness should help make this book a worthwhile addition to one's library.

Raymond B. Strauss, M.D., Ph.D.

The Frontal Lobes

Donald T. Stuss, Ph.D., and D. Frank Benson, M.D. New York, NY, Raven Press, 1986. Pp. 303. Illustrated. ($59.50)

In this book, the authors set out to present a compilation of neuroanatomical and neurophysiological knowledge about the frontal lobes of the human brain. The authors wisely made little reference to animal experimentation and models, which is appropriate since the frontal lobes are a prominent part of the human brain, but are much smaller in animals.

A very complete review of topics such as attention, emotion, awareness, memory, and cognition is presented, along with consideration of sensory and motor functions. The authors' discussion of the executive system of brain functions such as anticipation, goal selection, preplanning, and monitoring is quite interesting. The chapter on speech and language should be of special interest to those in clinical practice. The authors conclude with a discussion of their own three-part "behavioral anatomical theory" for frontal lobe functioning, consisting of: frontal functional system, executive functions, and self-awareness.

This book will be useful primarily for those students and researchers in the neurosciences, at both undergraduate and postgraduate levels, who desire a currently updated review of information about frontal lobe functioning and various theories of what role the frontal lobes play in overall human brain activity, and ultimately in human behavior. The authors have accomplished their stated goal very well in that regard. Although this book is not intended for wide reading by clinicians, some practicing neurosurgeons, neurologists, psychiatrists, and psychologists will find certain sections clinically relevant in understanding frontal lobe functions.

Stanley C. Leonberg, Jr., M.D.

Pediatric Magnetic Resonance Imaging

Mervyn D. Cohen (ed). Philadelphia, PA, W. B. Saunders Company, 1986. Pp. 162. ($49.95)

This short monograph, devoted to the use of this new imaging modality in pediatric radiology and devoid of complex equations, presents the subject in an admirably clear manner.

The first sections, discussing the safety aspects, physical principles, and problems concerning pediatric populations, are helpfully illustrated. Organ systems, including cardiovascular, respiratory, and neurological, also are covered. The somewhat dated scans of normal anatomy and pathological processes are included. Although well written, the chapter on neurological diseases would have benefited from additional discussion. Further in the book, the topics of contrast agents and spectroscopy receive brief attention.

A concise text, this book will be found valuable for the physician seeking a brief introduction to the field.

Neil B. Horner, M.D.

Radiology of the Hand

Cornelis J.P. Thijn, M.D. New York, NY, Springer-Verlag New York, Inc., 1986. Pp. 302. Illustrated. ($114)

The author, affiliated with the department of radiology of the State University Hospital in Groningen, Netherlands, has written an organized, concise, and well-illustrated compendium of the radiologic features of the diseases that affect the osseous structures of the hand and wrist.

For each disease, there is a short introductory general description of the disease, the radiographic findings in the hand as well as in other sites, a differential diagnosis, and a short list of references. Radiographs of the typical patterns of the disease in the hand and wrist as well as in other parts of the body follow. The reproductions are superb and clearly illustrate the bony manifestations.

Over a third of the book covers congenital diseases involving bones which in many cases are rarely seen in a general radiological practice.

Metabolic, endocrine, infectious, neoplastic, and other acquired diseases are discussed and illustrated.

Trauma to the bones is not discussed or illustrated. Perhaps the next edition could include this important subject.

The list of the differential diagnosis in each disease provides us with a cross-reference in the book where there is a discussion of each entity listed. This book offers us a rapid search so that we can identify and diagnose our problem with ease. This book is recommended to the working radiologist and orthopedist.

Sidney Ketyer, M.D.

Radiology of the Kidney

Alan J. Davison, M.D. Philadelphia, PA, W.B. Saunders, 1985. Pp. 793. ($90)

This is a new edition of a well-known text. While preserving the systematic format that is strongly responsible for its popularity, Dr. Davison brings the book up to date with an inclusion of new information.

Its first section, on techniques and anatomy, opens with a review of the physiology and hazards of ionic contrast material and continues with a discussion of the techniques involving intravenous urography, ultrasonography, and CT scanning. A review of the anatomy and embryology is next.

The core of the text, "Diagnostic Sets," groups chapters about pathological processes with regard to their effect on the kidney. The discussions include quality urograms, CT, and other modalities with the exception of MRI. A section, "Essays," includes chapters on nephrographic analysis and angiography.

Greatly expanded, but with no compromising of an organized approach, the book is highly recommended.

Neil B. Horner, M.D.

OBITUARIES

Drs. Albano; Calvin; Curran; Feller; Fullilove; Kinney; Lucas; MacDermid; Melvin; Mirti; O'Connor; Santangelo

Dr. Edwin H. Albano

New Jersey's first state medical examiner and president of the Board of Medical Examiners for 27 years, Edwin Henry Albano, M.D., died on September 4, 1986, in St. Barnabas Medical Center, Livingston. Dr. Albano was 78 years old at the time of his death. Born in Harrison, he received his medical degree from Bellevue Hospital Medical College, New York, in 1933, and entered the field of forensic pathology. Dr. Albano was a member of our Essex County component and of the American Medical Association. He was board certified in his specialty and a Fellow of the College of American Pathologists. Dr. Albano had been assistant professor of forensic medicine at UMDNJ-New Jersey Medical School, Newark, and had been affiliated with Holy Name Hospital, Teaneck; Saint Barnabas Medical Center, Livingston; Clara Maass Memorial Hospital, Bellevue; and Columbus Hospital, Newark. During World War II, he served in the medical corps of the Army of the United States, attaining the rank of major. In 1983, honoring his 50 years as a physician, Dr. Albano received MSNJ's Golden Merit Award. His list of memberships in medical colleges and societies is too numerous to mention, and in addition, his fraternal and civic activities seemed more than one man could handle. In 1961, Dr. Albano stated one of his proudest moments occurred when the Edwin H. Albano Institute of Forensic Medicine was dedicated near UMDNJ in Newark.

Dr. Charles H. Calvin

A past-president of the Medical Society of New Jersey (1964-1965), Charles Hiram Calvin, M.D., died on July 16, 1986, in his 90th year. Dr. Calvin was born in Nebraska, and was graduated from Tufts University School of Medicine, Boston, in 1929. He was a general practitioner for over 30 years in Perth Amboy prior to his retirement. Dr. Calvin was a member of our Middlesex County component and of the American Medical Association. He was a Fellow of the American Academy of Family Practice and of the American Geriatric Society. Dr. Calvin was the physician on Raritan Township's board of health, served on the board of the New Jersey Home for Disabled Veterans, and was medical director for E.I. duPont de Nemours facilities at Perth Amboy and Linden. He had been affiliated with Perth Amboy General Hospital, and served as a consultant to the Menlo Park Home for Disabled Veterans. In 1979, honoring his 50 years in medicine, MSNJ bestowed on Dr. Calvin its Golden Merit Award.

Dr. Everett R. Curran, Jr.

Everett Robert Curran, Jr., M.D., died suddenly on September 12, 1986, at only 55 years of age. Born in Collingswood, Dr. Curran was graduated from the University of Pennsylvania's School of Medicine, Philadelphia, in 1969. He established a practice in pediatrics in Cherry Hill, and was a member of our Camden County component and of the American Medical Association. Dr. Curran had been a director of medical education at West Jersey Hospital Systems.

Dr. William Feller

William Feller, M.D., a practitioner of family medicine in Jersey City for 50 years, died on August 27, 1986, in Christ Hospital in that city. Dr. Feller, who retired from active practice a year ago, was 78 at the time of his death. A native of Jersey City, he was graduated from George Washington University School of Medicine in 1934. Dr. Feller was a member of our Hudson County component and of the American Medical Association; he was a Fellow of the American Academy of Family Physicians. He had been affiliated with Christ Hospital and Greenville Hospital, Jersey City, and the Jersey City Medical Center. During World War II, Dr. Feller served in the medical corps of the United States Army, attaining the rank of major. In 1984, MSNJ bestowed on Dr. Feller the Golden Merit Award in recognition of his 50 years as a physician.

Dr. Robert E. Fullilove, Jr.

Robert Elliott Fullilove, Jr., M.D., died on August 9, 1986, at the age of 76. Born in Tupelo, Mississippi, Dr. Fullilove was graduated from Howard University College of Medicine, Washington, D.C., in 1934. A urologist, he established his practice in Newark, and became a member of our Essex County component, and of the American Medical Association. In 1965, Dr. Fullilove served as president of Essex County Medical Society. He was board certified in his specialty, and was a Fellow of the American College of Surgeons. Dr. Fullilove had been affiliated with Clara Maass Memorial Hospital, Bellevue, and with City Hospital, Newark Beth Israel, Children's, and Presbyterian Hospitals, all in Newark. In 1984, Dr. Fullilove was a recipient of MSNJ'S Golden Merit Award, in recognition of his 50 years as a physician.

Dr. Albert G. Kinney

A retired otolaryngologist, Albert Girton Kinney, M.D., died at his home in Sanford, Florida, on August 19, 1986, at the advanced age of 82. A Pennsylvanian, Dr. Kinney received his medical degree from Jefferson Medical College, Philadelphia, in 1928. Originally a member of our Camden County component, he later switched to our Burlington County component, and also became a member of the American Medical Association. He was board certified in his specialty, and prior to his retirement in 1966 had been affiliated with Cooper Hospital, Camden. In 1978, Dr. Kinney received MSNJ's Golden Merit Award, honoring his 50th anniversary in medicine.

Dr. William F. Lucas

A practitioner of family medicine in Burlington for over 30 years, William Frederick Lucas, M.D., died on August 28, 1986, at the venerable age of 84. A native of Spring Mills, Pennsylvania, Dr. Lucas was graduated from Jefferson Medical College, Philadelphia, in 1930. He was a member of our Burlington County component and of the American Medical Association. Dr. Lucas had been affiliated with Memorial Hospital of Burlington County, Mount Holly. In 1980, Dr. Lucas was among the physicians honored by MSNJ with their Golden Merit Award, recognizing their 50th anniversary in medicine.

Dr. Lynden E. MacDermid

At the venerable age of 89, Lynden Elwood MacDermid, M.D., family physician in Bordentown for nearly 60 years, died at Mercer Medical Center, Trenton, on September 2, 1986. Born in Martintown, Ontario Province, Canada, Dr. MacDermid was graduated from McGill University Faculty of Medicine, Montreal, Canada, in 1924. He was a member of our Mercer County component and of the American Medical Association. Dr. MacDermid had been affiliated with Mercer Medical Center, Trenton.

Dr. Daniel G. Melvin

A retired psychiatrist, who had been living in Orlando, Florida, Daniel George Melvin, M.D., died on August 31, 1986, at the advanced age of 81. Born in Ovett, Mississippi, Dr. Melvin was graduated from the University of Louisville School of Medicine, Kentucky, in 1928. He was a member of our Morris County component and of the American Medical Association. Dr. Melvin had been the resident physician at the Greystone Park Psychiatric Hospital for many years. In 1978, he was a recipient of MSNJ's Golden Merit Award, honoring his 50 years in medicine.

Dr. Michael Mirti

A cardiologist and internist, who practiced in Succasunna since 1969, Michael Mirti, M.D., died in Dover General Hospital, on August 9, 1986. Born in 1929, in New York City, Dr. Mirti received his medical degree from the University of Bologna, Italy, in 1963. He was a member of our Essex County component and of the American Medical Association. Dr. Mirti had been affiliated with Dover General Hospital, and Saint Michael's Medical Center, Newark. He also was company physician for Hercules Powder Company, Kenvil, and was the review physician for the Social Security Disability Division, Newark, for the past 13 years. Dr. Mirti is survived by his wife, Barbara De Stefano Mirti, also a physician in the same field, who shared an office with her late husband.

Dr. John J. O'Connor

At the venerable age of 95, John Joseph O'Connor, M.D., a Union City urologist prior to his retirement, died on April 5, 1986. Born in Albany, New York, Dr. O'Connor was graduated from Albany Medical College in 1915. He became a member of our Hudson County component and of the American Medical Association. Dr. O'Connor was a Fellow of the American College of Surgeons, and when active, had been affiliated with St. Mary's Hospital, Hoboken, and Holy Name Hospital, Teaneck. During World War I he served in the medical corps of the United States Army. In 1965, MSNJ conferred on Dr. O'Connor its Golden Merit Award, in recognition of his 50 years in medicine.

Dr. Joseph A. Santangelo

Joseph Anthony Santangelo, M.D., a practitioner of family medicine in Newark for 34 years, died in Mountainside Hospital, Montclair, on August 24, 1986, at 70 years of age. A native of Newark, Dr. Santangelo was graduated from Indiana University School of Medicine, Indianapolis, in 1941. He was a member of our Essex County component and of the American Medical Association. Dr. Santangelo was director of the emergency and outpatient departments at Columbus Hospital, Newark, and had been affiliated with Clara Maass Memorial Hospital, Bellevue, St. Vincent's Hospital, Montclair, and St. James Hospital and Saint Michael's Medical Center, both in Newark. He also was plant physician for the McGraw-Ediwon Company, Bellevue, for six years. During World War II, Dr. Santangelo served in the medical corps of the United States Army, and was awarded two Bronze Stars. He had been active in civic affairs, serving on the board of directors of the Boys' Club of Newark for 30 years and a volunteer at St. Vincent's Nursing Home, Montclair.

AUTHOR INFORMATION

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CONTENT

The educational content of each issue appears as scientific articles, based on research, original concepts relative to epidemiology of disease, and treatment methodology; case reports based on unusual clinical experiences; review articles; clinical notes, succinct items on some aspect or new observation or technique of a case experience; and special articles, which include evaluations, policy and position papers, and reviews of nonscientific subjects. Other topics include commentary (critical narration); medical history; therapeutic drug information; pediatric briefs; nutrition update; and an opinion column. Editorials are prepared by the Editor and by guest contributors on timely and relevant subjects; editorials are the responsibility of the author. The Doctors' Notebook section contains organizational, informational, and administrative items from MSNJ and from the community. Letters to the Editor and book reviews are welcome and will be published as space permits. The principal aim in the preparation of a contribution should be relevance to diagnosis and treatment and to education of patients and professionals. Preference will be given to professional authors from New Jersey and to out-of-state lecturers who submit a suitable manuscript based on a presentation made in New Jersey.

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SPECIFICATIONS

Submit two **manuscripts** that must be typewritten and double-spaced on 8½" by 11" paper. Statistical methods used in articles should be identified. Acknowledgements will be made only for specific preparation of an essential part of the manuscript.

Authors are asked to seek clarity, accuracy, and originality; attention to details of grammar, spelling, and typing are important.

The **title page** should include the full name, degrees, and affiliations of all authors, and the name and address of the author to whom reprint requests should be sent.

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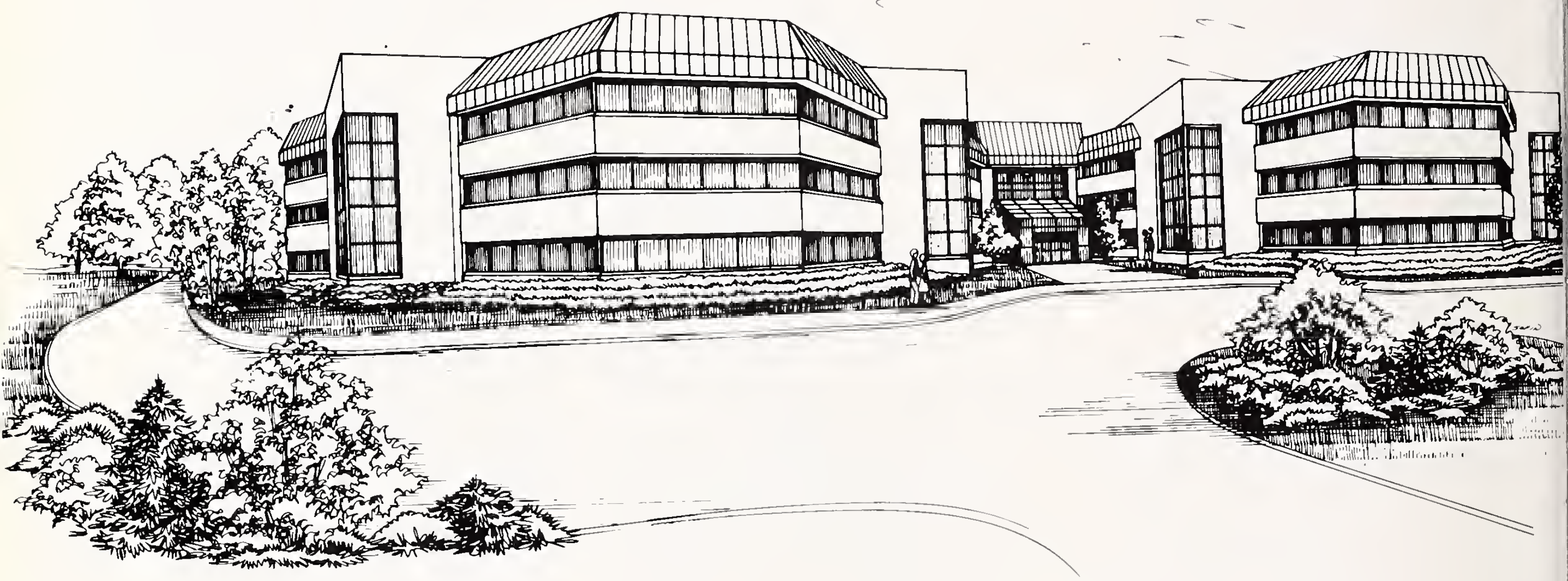

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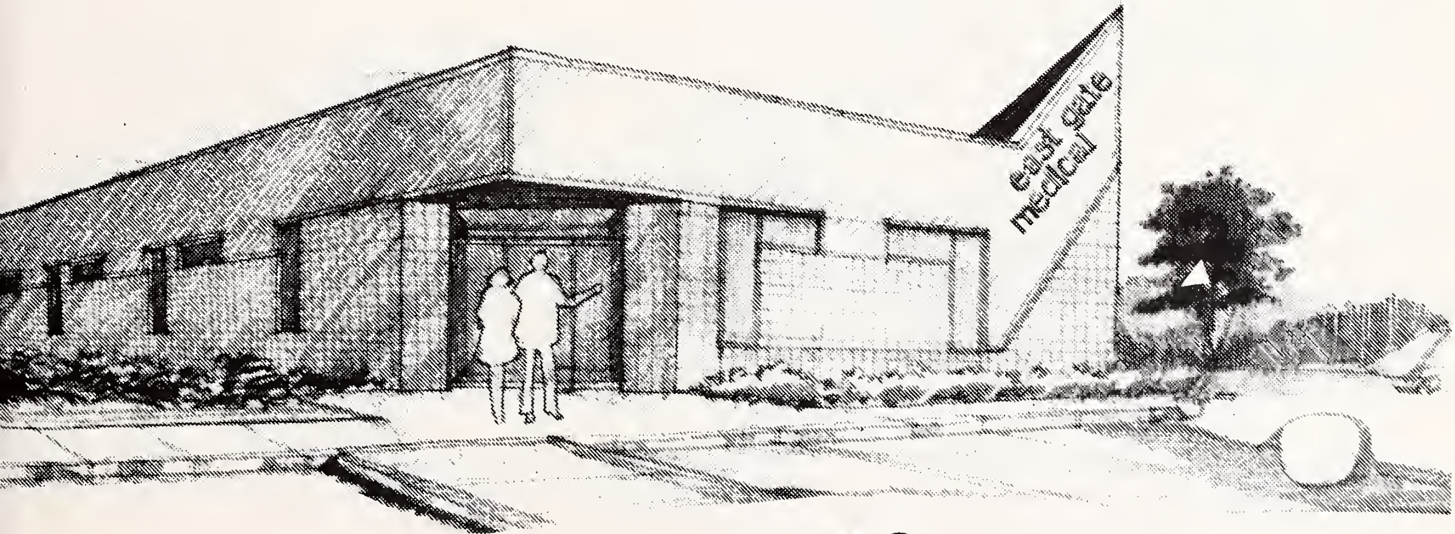

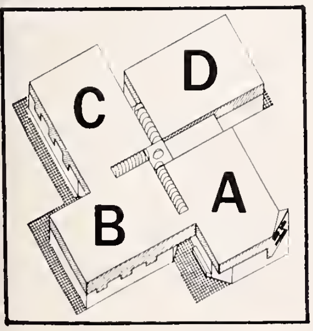

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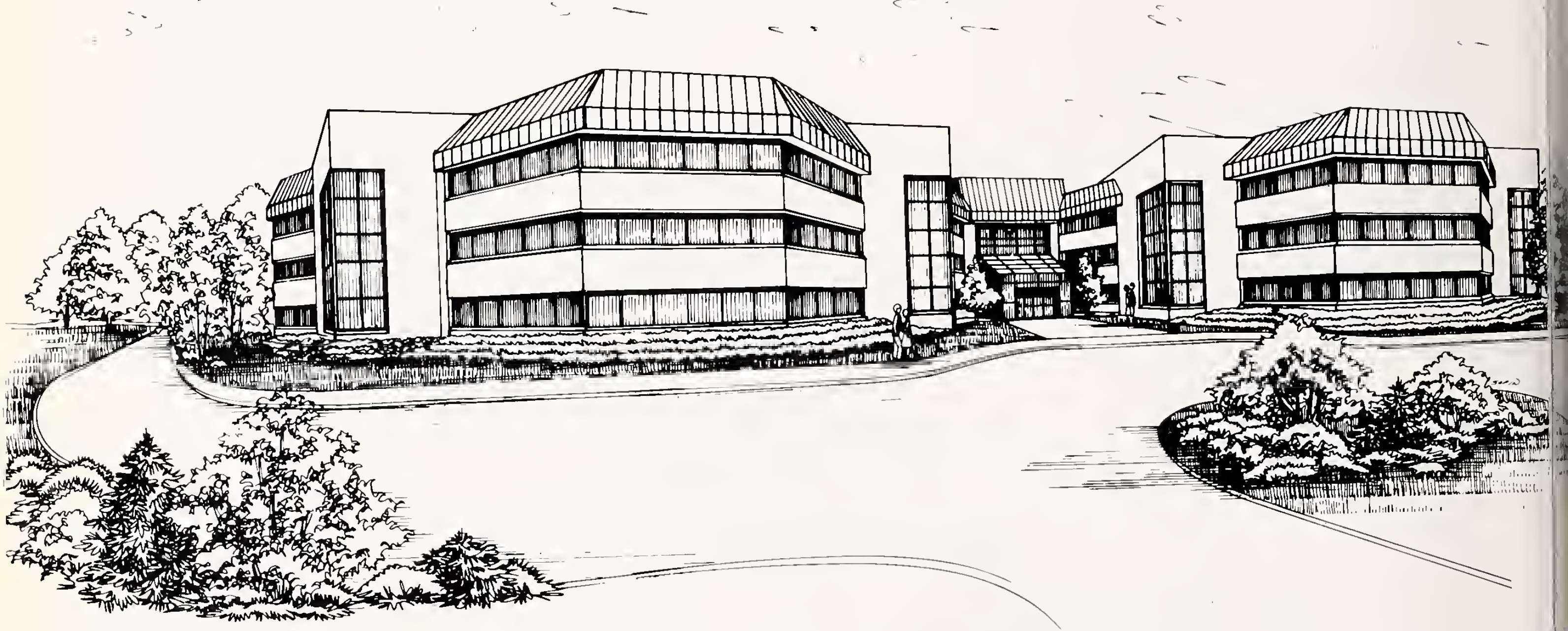

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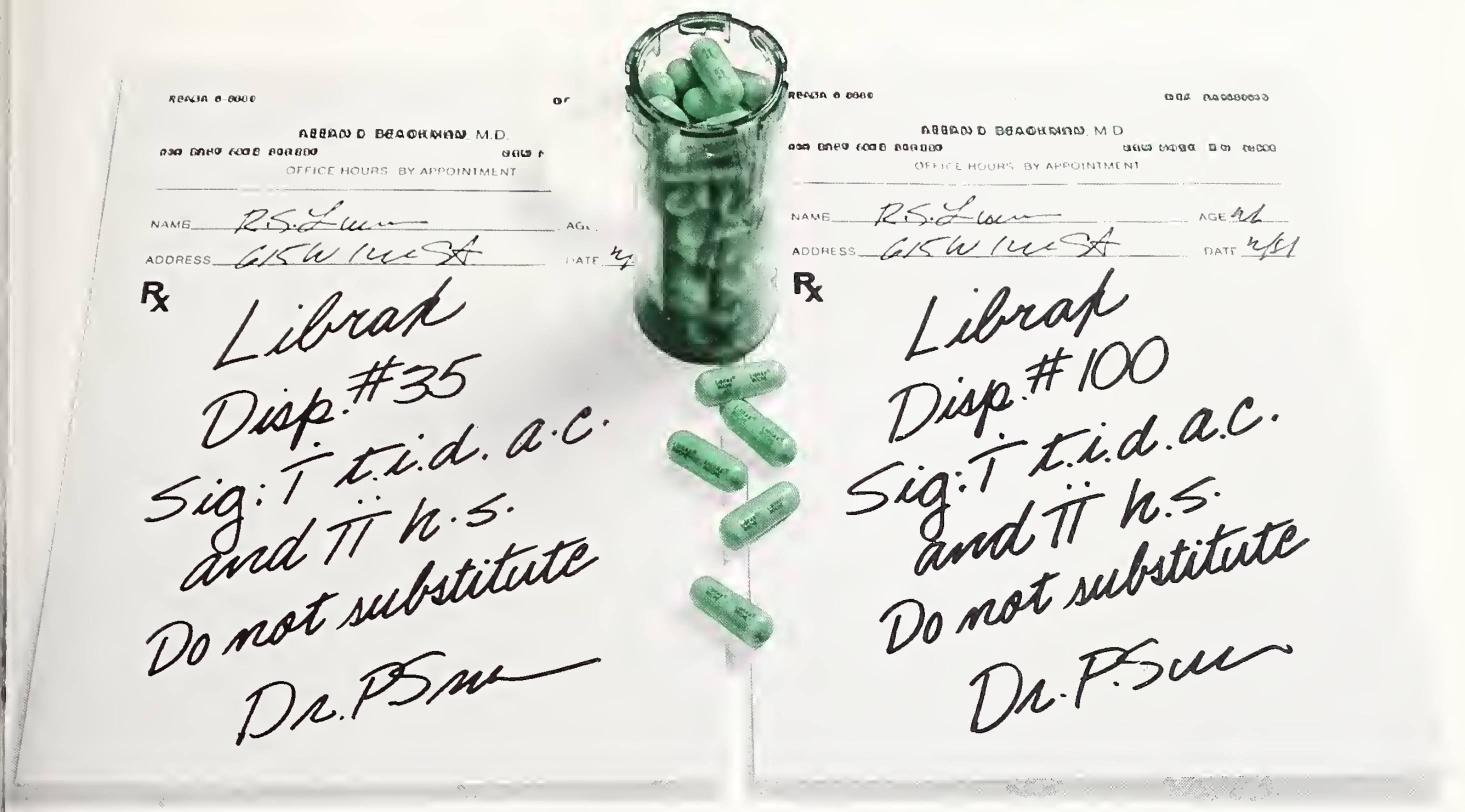

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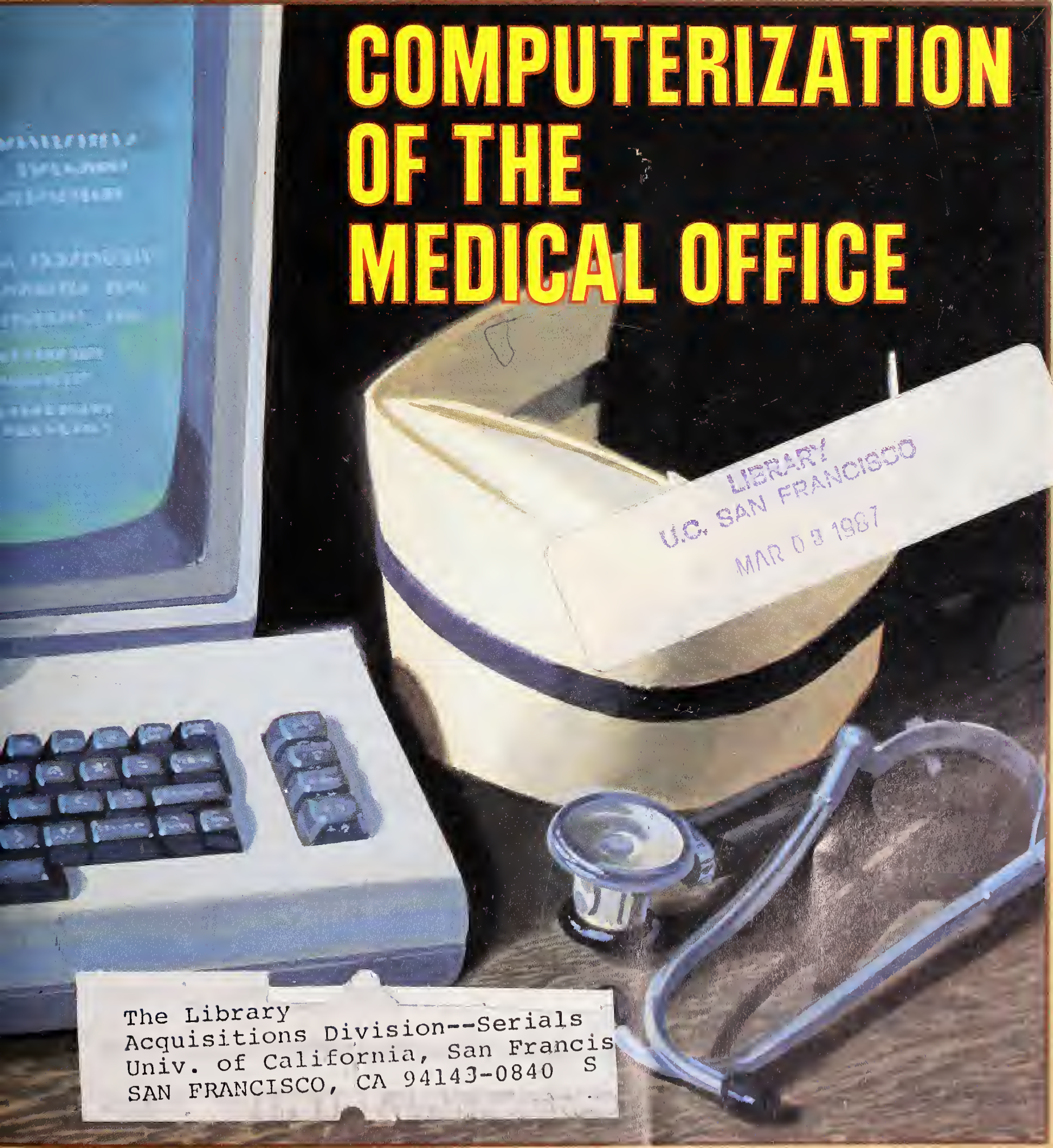

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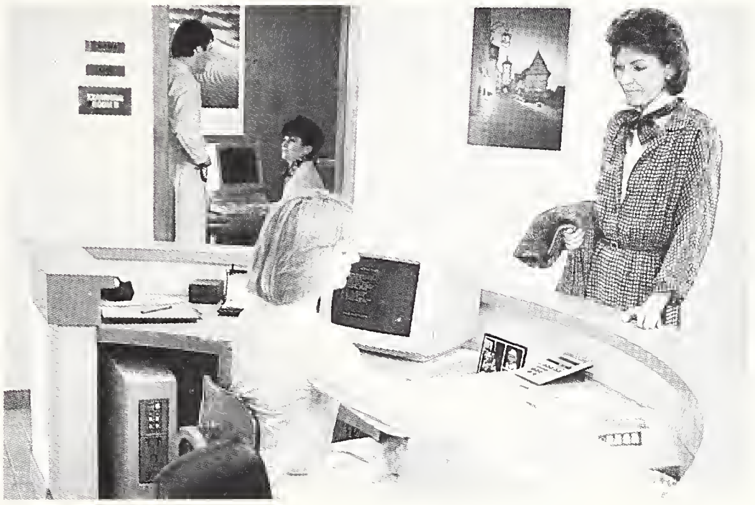

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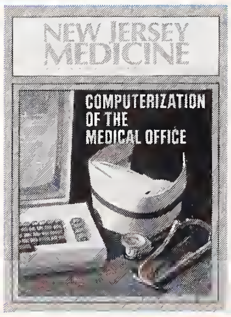

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INDERAL® LA

(PROPRANOLOL HCl)

after a major nationwide trial...

...we had to find just the right room.

0,073 patients (90%) who started on NDERAL® LA stayed on INDERAL LA.[1]*

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Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

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INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking bette

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES

80 mg 120 mg 160 mg

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability heart to respond to reflex adrenergic stimuli may augment the risks of general anesthes surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta- tor agonists and its effects can be reversed by administration of such agents, e.g., dobu or isoproterenol. However, such patients may be subject to protracted severe hypote Difficulty in starting and maintaining the heartbeat has also been reported with beta bl

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appe of certain premonitory signs and symptoms (pulse rate and pressure changes) of hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more dif adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyr Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of sy of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid functio

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have reported in which, after propranolol, the tachycardia was replaced by a severe brady requiring a demand pacemaker. In one case, this resulted after an initial dose of propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with im hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatm hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may le return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart di elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as pine should be closely observed if INDERAL is administered. The added catechol blocking action may produce an excessive reduction of resting sympathetic nervous which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orth hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animal been conducted to evaluate toxic effects and carcinogenic potential. In 18-month stu both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of cant drug-induced toxicity. There were no drug-related tumorigenic effects at any dosage levels. Reproductive studies in animals did not show any impairment of fertility th attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in studies at doses about 10 times greater than the maximum recommended human dose

There are no adequate and well-controlled studies in pregnant women. INDERAL sho used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hy sion; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usually Raynaud type.

Central Nervous System: lightheade mental depression manifested by insc lassitude, weakness, fatigue; reversible r depression progressing to catatonia; disturbances; hallucinations; an acute r ible syndrome characterized by disorier for time and place, short-term memory emotional lability, slightly clouded sens and decreased performance on neurops metrics.

Gastrointestinal: nausea, vomiting, e tric distress, abdominal cramping, dia constipation, mesenteric arterial throm ischemic colitis.

Allergic: pharyngitis and agranulocy erythematous rash, fever combined with aching and sore throat, laryngospasm and respi distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic pu

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has be ported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impot and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions inv the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) ha been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloric sustained-release capsule for administration once daily. If patients are switched from IND tablets to INDERAL LA capsules, care should be taken to assure that the desired thera effect is maintained. INDERAL LA should not be considered a simple mg for mg substit INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitratio be necessary especially to maintain effectiveness at the end of the 24-hour dosing inter

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 8 INDERAL LA once daily, whether used alone or added to a diuretic. The dosage m increased to 120 mg once daily or higher until adequate blood-pressure control is achi The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage mg may be required. The time needed for full hypertensive response to a given dos variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDER once daily, dosage should be gradually increased at three to seven day intervals until opt response is obtained. Although individual patients may respond at any dosage leve average optimum dosage appears to be 160 mg once daily. In angina pectoris, the valu safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few week WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDER once daily. The usual effective dose range is 160-240 mg once daily. The dosage m increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response obtained within four to six weeks after reaching the maximum dose, INDERAL LA th should be discontinued. It may be advisable to withdraw the drug gradually over a per several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group a limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laborato
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxpre atenolol, and metoprolol given once daily. *Arch Intern Med* 1985;145:1321-1323.

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MEMBERSHIP NEWSLETTER

MSNJ

THE MEDICAL SOCIETY OF NEW JERSEY VOLUME 40

THE HEALTH PROVIDER LAWYER

The increasing range of regulation has spawned yet another new breed of lawyer—the health provider lawyer. Unlike the traditional attorney specializing in health-related matters, the health provider lawyer's base of operation is not the hospital or the medical malpractice carrier; rather, he focuses his expertise squarely on the activities of the health care provider—predominantly, the physician. In recent years, the demand for this field of expertise has widened. Indeed, the attorney who does not devote himself exclusively to this area may find himself ill equipped to adequately represent the interests of health provider professionals.

As the "business of medicine" takes an ever greater role in the practice of medicine, the need for legal representation increases. Unlike the usual business transaction, however, decisions concerning the business of medicine involve a myriad of laws and regulations governing the practice of medicine. For example, business practices such as percentage rate leases and employee incentive plans can violate many Medical Practice Acts. Joint ownership of medical equipment creates a hornet's nest of potential difficulties from concerns of kickbacks to improper motivation for ordering diagnostic tests.

Many incentives offered by laboratories, supply houses, and referral facilities, including stock ownership, seminars, consulting fees, rental of storage space, and the like are areas of substantial concern.

A number of states now are considering regulations requiring financial disclosure to patients when a professional profits directly or indirectly from laboratory tests, diagnostic services, equipment or pharmaceuticals provided in whole or in part by others. Other states may prohibit some of these practices entirely. Malpractice cases can turn on questions of financial relationships between the person ordering services or equipment and the person or entity providing them.

Perhaps the best example of this results from the recent disclosures concerning sales tactics utilized by certain pacemaker manufacturers, including travel incentive and equipment and consulting fees for those ordering their devices. Charges of collusion between the physicians ordering the pacemakers and manufacturers supplying them already have found their way into malpractice claims.

Patient relations, and particularly collection policies, are more likely to affect the likelihood of lawsuits than the care and skill of the practitioner. Few practitioners, however, review the tactics of their collection agencies or employees. Many corporate collection practices utilized by ordinary business enterprises can have disastrous results when utilized by health professionals. Citibank and American Express do not risk increased litigation claims by hard-nosed business policies. Physicians are much more likely to do so.

Due to these special concerns, no lease, employment agreement, collection, joint venture, or other business venture should be conducted without the advice of a health provider attorney. Specific issues to look at include the following:

Percentage Leases: Many landlords, especially those renting space in shopping centers, routinely base rent, at least in part, on a percentage of gross fees. This may be viewed by a state medical board as an illegal fee-splitting arrangement which could subject a practitioner to disciplinary action including loss of license. The same issue exists for leasing hospital space.

Ownership of Diagnostic or Treatment Facilities or Supply Companies: When a physician joins with other physicians or with nonphysicians to provide laboratory testing, diagnostic services, therapeutic modalities, or medical equipment or supplies, the physician must carefully consider whether such arrangements create either fee-splitting or kickback problems. Careful and concise drafting of documents to relate specifically the value of personal services or investment to the profits anticipated can substantially reduce the risk of any adverse finding by a disciplinary board.

Risk Management: Physicians routinely hear of risk management procedures utilized within hospitals, but rarely put these practices into place in their own practice. An office manual, carefully delineating the roles and responsibilities of staff, defining wage and hour policies such as vacations and overtime, prohibiting the practice of medicine by nonphysicians and the practice of nursing by unlicensed staff can avoid disciplinary action. Similarly, carefully defined emergency procedures and requirements that the physician be contacted personally when certain conditions exist can save enormous heartache. This is a service the health provider attorney uniquely is able to provide since he will be most sensitive to the issues involving scope of practice, emergency procedure, and the like.

Billing: Claims of overutilization and excessive fees are mounting. Most often these result from failure to explain the necessity of the procedure or the cost in advance. Patient information sheets explaining routine procedures, the need for them and their cost substantially can reduce misunderstandings and complaints and increase collections. Physicians performing services at the request of referring doctors often incorrectly assume that the patient is aware of the procedures, their purpose, and their cost. Providing this information, in writing, beforehand, along with requiring signed informed consent, can diminish the likelihood of suit or disciplinary action. An attorney familiar with these issues best can assist in drafting these documents.

Third-Party Reimbursement: Physicians should avoid Medicaid participation unless they are fully knowledgeable of the myriad of regulations involved in this program. Overeager prosecutors are seeking indictments against well-meaning health practitioners for technical violations of the law. Conviction of Medicaid fraud likely will result in loss of licensure. No practitioner should be involved in this program without carefully reviewing all record keeping, treatment, and billing practices with an attorney knowledgeable in this area. While not as problematic, other third-party payors, including Medicare, Blue Cross/Blue Shield, and private insurance companies are imposing even more detailed and stringent requirements. Seemingly innocent practices, such as waiving the portion of the bill that insurance does not pay, could result in charges of fraud and misrepresentation. For example, where an insurance company pays 80 percent of a usual and customary charge of $200, and the physician does not attempt to collect the other 20 percent or $40, a company could take the position that the actual fee was not $200 but only the amount anticipated to be collected, i.e. $160. If that were so, it would only be responsible for 80 percent of the $160 or $128. Thus, it may claim it has been defrauded of $32.

Record Keeping and Distribution of Information: Most malpractice attorneys agree that proper record keeping is the single most critical element in reducing the risk of suit. Despite this, many physicians do not maintain proper records. Nor do they maintain office systems to adequately follow up on patients, assure timely reporting of laboratory studies or notify patients of significant laboratory results. Health provider attorneys can aid the physician in designing appropriate record keeping techniques and implementing fail safe reporting systems.

Response to Attorneys and Investigators: Perhaps the most serious opportunity for self-inflicted injury occurs when a physician responds to subpoenas, document demands, or investigative inquiries without competent legal representation. One could correlate the results with a physician trying to perform an appendectomy on himself. Even if the operation could be succesful, the pain associated with it would be excrutiating. Great sensitivity to the law and the nuances of responses must be exhibited in such circumstances. Careful preparation and identification of problem areas in advance of a response must occur. The mere fact that an investigator demands information or documents does not necessarily require you to turn it over—and certainly not immediately. Before providing any information beyond name and address, a knowledgeable health provider lawyer should be consulted. More information adverse to the interest of the physician is volunteered unnecessarily and unwittingly than through any other source. Before providing any law enforcement officer or investigator with any information, a consultation with a health provider lawyer should occur. Similarly, if a physician is required to give a deposition or appear in court, he should not do so without first obtaining advice as to his obligations, responsibilities, and rights.

In summary, the practice of medicine now has become inexorably linked with legal considerations. Even the finest and most astute practitioner cannot have a full comprehension of the laws and rules under which he must practice. Keeping abreast of these requirements is the full-time job of the health provider attorney.

A health provider attorney is as necessary to today's practice of medicine as an accountant. A doctor should be no more willing to address the intricacies of medical law than he is to do his own accounting. The health provider attorney must unfortunately become a routine mandatory consult. Steven I. Kern

MEDICAID AND COMMISSIONER DREW ALTMAN

The following is the speech presented by Human Services Commissioner Drew Altman concerning Medicaid:

I want to try and restrict myself to one issue that I believe is of immediate concern—our low rate of reimbursement for physicians and other practitioners who serve people on Medicaid—and its implications for access to health services and the cost-effectiveness of our Medicaid program.

Let me start by saying that, since its passage in 1965, the Medicaid program has made the critical difference in affording access to health care services for the disadvantaged in our country and in our state. In my view, Medicaid needs to be protected and it needs to be improved. I would not support any measures that would cut back on Medicaid services or see Medicaid patients' access to needed care further eroded.

Perhaps the biggest accomplishment of the Medicaid program is this: In sharp contrast to the pre-Medicaid era, the poor now see a doctor and go to a hospital at least as often as the non-poor in New Jersey and across our country.

Moreover, despite the fact that the people served by Medicaid are sicker than the general population, Medicaid has served them at the same or at less cost than comparable insurance provided to the general population.

Medicaid, of course, also serves our most vulnerable populations. Despite public preconceptions about who is on Medicaid, the Medicaid program actually serves three groups: 1) low income mothers and children; 2) the blind and the disabled; and 3) poor elderly citizens of our state. Thus, Medicaid really is three programs in one, and each of these programs serves a very needy and vulnerable group.

However, despite this record of success, Medicaid is not without problems. For one, Medicaid never has become a comprehensive health insurance program for all low-income people. In fact, today Medicaid covers less than 50 percent of the poor and near-poor.

Medicaid's effectiveness is perhaps its most important area—providing primary care and other basic medical services to covered groups. This area is slipping, and is in danger of slipping further. In large measure, this is because our low rates of reimbursement for physicians and other practitioners are driving them away from serving Medicaid patients. As a result, access to basic services is eroding and Medicaid patients are delaying needed care. Further, when they seek care, they are increasingly relying on much more expensive and sometimes less effective hospital outpatient departments and emergency rooms; sites which are not now well equipped to serve in the role of personal physicians.

Medicaid reimbursement in New Jersey has been almost stagnant outside of the institutional area for many, many years.

Today, we are paying physicians $7 for a routine office visit, as compared with the approximately $22 from Medicare and the $35 physicians receive from their private patients. We are paying dentists $7.50 for an uncomplicated tooth filling and $9 for an uncomplicated tooth extraction, while they are paid about $40 from their private patients. Further, we are paying obstetricians only $236 for a full package of obstetrical services, which includes prenatal care, delivery, and postpartum care. This compares with between $1600 and $2000 for private patients. We even are limiting Medicaid patients to $5 eyeglass frames that are unpopular and often substandard.

These rates exist because fees to professional practitioners are not indexed to any consumer price factor or cost of living formula, but rather are negotiated based upon the specific funding levels made available through the annual appropriations process. With overall budget constraints and the press of other state priorities, these rates have remained almost static since the inception of the Medicaid program in New Jersey in 1970. As a result, each year we fall further and further behind fees paid by other public programs and in the marketplace. This is in contrast to payments to institutional providers, such as hospitals and nursing homes, where fees are routinely increased based upon costs and inflation factors.

What does all this mean? Let me be blunt. I am not convinced that physicians in our state will be unable to make an adequate living. To be sure, physicians are being buffeted by multiple changes in our health care system. Nevertheless, I am confident that when things shake out physicians will continue to do well economically and will continue to be viewed as one of the most respected groups in our society.

My primary concern, with regard to this issue of Medicaid rates, is for preserving access to needed health services for the poor, the elderly, and disabled served by Medicaid, and for assuring that Medicaid gets the best buy for its dollar.

Today, there are sections of our state where a Medicaid-eligible pregnant woman cannot obtain prenatal care because there are no physicians or obstetricians in her area willing to see her at the current low rate of reimbursement. This means that she cannot receive necessary health care, prescription drugs, nutrition counselling, and so on, thereby endangering not only her own physical health but that of her unborn baby. Too often these women end up presenting themselves in the emergency room of a hospital on the day they go into labor, having received little or no prenatal care.

The impact of low reimbursement rates is perhaps most graphically seen in the area of obstetrical services, but this is a problem across the board in our Medicaid program. In the last six years, the already low number of physicians participating in Medicaid declined further, from 6,888 in 1981 to 6,744 in 1986. The total number of physician visits also has declined by 20 percent over that same time period. Thus, while total health care expenditures have gone up, spending for physicians' services in our Medicaid program has actually gone down—from $62.6 million in 1981 to $52 million in 1986. This compares, for example, to a 20 to 25 percent increase in recent years in payments for physician services under the Medicare program.

This all occurs, ironically, at a time when we have more and more practicing physicians in our state which, one would think, would result in greater physician participation in the Medicaid program, not less. In fact, our rates of reimbursement are so low that even the increasing competitive demands in the marketplace on physicians have been inadequate to stimulate more of them to care for Medicaid patients.

Just as important as the impact of our low rates of reimbursement on access to health care, is its impact on cost.

When Medicaid patients cannot get care from a personal physician, they often delay needed care, and then ultimately receive it in a much more expensive hospital setting. Our statistics from the Medicaid program bear this out. In recent years, for example, the number of participating physicians has gone down, while outpatient and emergency room visits have gone up—from 847,000 in 1982 to 938,000 in 1986. On the average, care in such settings costs six times as much as care provided in a private physician's office. It is interesting to note that if the increase in patient visits to hospital outpatient departments and emergency rooms in the last four years had not occurred, and if those patients had received care from private physicians instead, the Medicaid program would have saved approximately $6 million in last year.

Over the last month, I have been traveling across the state and meeting with welfare recipients to discuss our welfare reform initiative. All of these young mothers on welfare, of course, are eligible for Medicaid as well. Of the first group of eight welfare recipients I met, two reported that their physicians recently had refused to care for them as a result of low Medicaid rates. In the second group of six, three made the same claim. This is, of course, sad, but not altogether surprising. In fact, in many cases the cost of supplies needed to treat Medicaid patients are actually higher than the Medicaid payment for the total service.

Although I plan to promote diligently more cost effective health care delivery systems, such as HMOs and our Medicaid Personal Physician Plan, and look for opportunities to bring prepayment and case-management to other settings such as hospital outpatient departments, it is clear that we will not have enough providers of prepaid services in New Jersey to service the entire Medicaid population. Thus, it is essential that we maintain a viable provider fee structure for our Medicaid service system to provide the necessary care to keep our adults and children healthy.

Therefore, I urge you as a committee to help remedy the situtation by recognizing that if current trends persist, the state Medicaid program's objectives will be seriously undermined, and working with us to make Medicaid participation more attractive to health care providers.

Let me just close by saying, then, that from the point of view of one who is committed to preserving and improving access to health services for the disadvantaged, and is committed to a more cost-effective health care system, it is imperative that we take a closer look at our Medicaid fee structure and make the changes that are warranted.

MSNJ: PUBLIC RELATIONS AWARD

Paolin & Sweeney, MSNJ's public relations agency, took third place in the prestigious Philadelphia TRAC Creative Awards with MSNJ's "Lethal Weapons" advertisement that appeared in *Time* magazine and state newspapers.

THE STATION

Tucked away in our subconscious minds is an idyllic vision. We see ourselves on a long, long trip that almost spans the continent. We're traveling by passenger train, and out the windows we drink in the passing scene of cars on nearby highways, of children waving at a crossing, of cattle grazing on a distant hillside, of smoke pouring from a power plant, of row upon row of corn and wheat, of flatlands and valleys, of mountains and rolling hillsides, of city skylines and villagehalls, of biting winter and blazing summer and cavorting spring and docile fall.

But uppermost in our minds is the final destination. On a certain day at a certain hour we will pull into the station. There will be bands playing and flags waving. And once we get there so many wonderful dreams will come true. So many wishes will be fulfilled and so many pieces of our lives finally will be neatly fitted together like a completed jigsaw puzzle. How restlessly we pace the aisles, damning the minutes for loitering . . . waiting, waiting, waiting for the station.

However, sooner or later we must realize there is no one station, no one place to arrive at once and for all. The true joy of life is the trip. The station is only a dream. It constantly outdistances us.

Robert J. Hastings

STOP, LOOK, AND LISTEN

Should you be involved in a partnership or joint group practice where your name is listed on a common prescription form, make certain all such forms are destroyed if you leave. It may be necessary for you to pay the cost of replacement, but it could protect you from charges of unlawful use of the prescription form.

A recent case involving a dissolved partnership has the remaining partner involved in unlawful writing for narcotics. The departing partner has been caught up in the investigation since his name still appeared on the printed forms.

ADVANCES IN CANCER

The next article in our series, "Advances in Cancer," appears on page 125. The discussion by Drs. Keegan and Ozer, "Alpha Interferon Therapy in Hematologic Malignancies," specifically deals with the background of alpha interferon and its role in the treatment of hairy cell leukemia. This article was based in part on an address made by Dr. Ozer at a meeting of the Oncology Society of New Jersey held in May 1985.

Two New Jersey pharmaceutical firms, Hoffmann-La Roche, in Nutley, and Schering, in Union, have developed technologies to produce interferon in sufficient quantities to permit meaningful clinical trials and now are producing alpha interferon commercially for the treatment of hairy cell leukemia. It can be anticipated that further developments in the future will make these substances more applicable for a wider population of cancer patients.

Alan J. Lippman, M.D.

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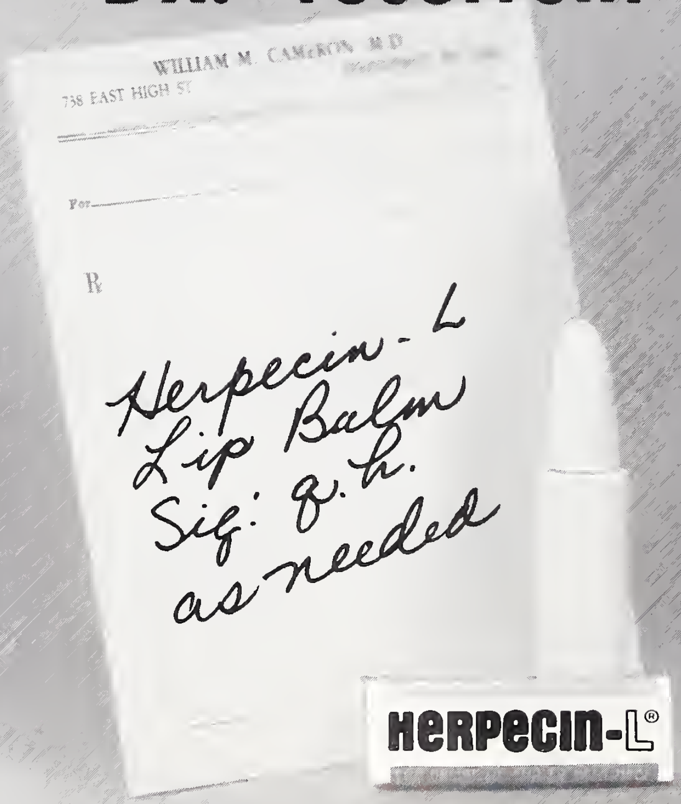

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PROFESSIONAL LIABILITY COMMENTARY*

Why Rates Rise

Are You Listening; Flaws in Recordkeeping; Premium Return Approved for MIIENJ Policyholders; 1987 Rates Up

DOCTOR, ARE YOU LISTENING?

It's 4:30 P.M., Friday, and you have one more new patient to see. You're anxious to get home and begin your weekend off call. Your last patient is ushered in. You ask, "And what brings you into the office today, Mr. Thomas?" He already is unpacking a shopping bag and arranging an assortment of prescription bottles on your desk. The patient begins his story: "Well, I haven't been feeling up to par lately. Not sick, mind you, but not quite right either. I've been having these headaches—not real bad headaches, more annoying than painful ...." You're listening, but for how long before you jump in and take control of the conversation? "Now about these headaches, Mr. Thomas ...."

Communications is defined as a process by which information is exchanged between two (or more) individuals. In the physician-patient relationship, it is a dialogue—a physician and his/her patient talking to and listening to each other. The first and possibly most important step in the physician-patient encounter is the patient's transfer of information to the physician—the reason for the patient's visit, the vital information which will be the basis for the physician's working diagnosis, and future course of action.

A study at Wayne State University School of Medicine conducted by Howard B. Beckman, M.D., and his colleagues, taped 74 office visits to study the physician's behavior and role in soliciting the patient's concerns at the outset of the clinical encounter *(Ann Intern Med* 101:692-696, 1984). Dr. Beckman found that only 23 percent of the patients completed their opening statement before physician interruption. For the 74 visits, interruption occurred, on average, 18 seconds after the patient began to speak. The physician interruption occurred most often after the expression of a single stated concern by the patient. And, once interrupted, only 1 of 52 patients went on to complete his or her statement. Most of the interruptions in the 74 visits occurred between 5 to 50 seconds after the physician's initial request for information. In contrast, most completed patient statements took less than 60 seconds and none took longer than 150 seconds.

The results suggest that physicians frequently, and perhaps unwittingly, inhibit or interrupt their patients' initial expression of concerns. Physician participation in the opening moment of the clinical encounter is far from neutral and has a substantial effect on the type and quality of information obtained from the patient. The consequence of this controlled style is the premature interruption of patients, resulting in a potential loss of relevant information—information that is critical to the physician's information-gathering process and diagnostic hypothesis.

Physician-patient communication is extremely important; studies have shown it to be important enough to make a patient change doctors if that communication is perceived to be less than optimal. Patient perceptions of a physician unwilling or unable to communicate—to listen—will impact adversely on the patient's overall perception of the quality of care received from that physician.

From a medical-legal viewpoint, a diagnosis or plan of treatment based on data collected after listening to a patient's complaint(s) for 18 seconds is fraught with risk. "Failure to diagnose ..." and "misdiagnosis of ..." are among the most commonly seen allegations against insured physicians. Better physician-patient communications could change that. Polish up your two-way communication skills—especially the role of the physician as listener. Take your time to really listen to your patients. Give them a chance to talk. What they have to say and how they say it is important. *(Pennsylvania Medical Society: Liability Insurance Company Newsletter 8:6, 1986).*

THREE DANGEROUS FLAWS IN RECORDKEEPING COULD SPELL LEGAL TROUBLE

A number of medical record documentation deficiencies which can jeopardize the defense of a medical malpractice claim may become apparent only in retrospect. Consider these examples:

- Incomplete, vague descriptions. In this case example, part of an internist's examination note read, "Small breast cyst. Observe." Another note several months later read, "Lump gone." A year later when the patient sued the physician for cancer of the left breast and claimed the lump he had said was gone was a malignancy he overlooked, the physician argued that his notes referred to a cystic lump in the right breast, although the note did not say "right" or "left" and did not describe the lump's location or size. The doctor maintained that the left breast always was examined and that the absence of a mention of the left breast examination meant the examination was negative. The patient denied that both breasts always were examined. After reviewing the unclear chart notes, a peer review committee recommended settlement.

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*From the Department of Professional Liability Control, MSNJ. This column was prepared by James E. George, M.D., J.D., and A. Ronald Rouse who are Director of the Department and Director of Special Projects, respectively.

A charting aid which enables the physician to record more information while writing less is a simple diagram or line drawing. Pre-printed or rubber-stamped anatomical diagrams can be used to mark the location of lacerations, burns, breast lumps, erythematous areas, and foreign body puncture sites. These diagrams supplement narrative descriptions of size, depth, or severity and reduce the number of words needed to describe areas of injury. In litigation, picture-word descriptions can refute exaggerated claims about the extent, severity, or location of an injury or lesion.

- Legibility. Illegible entries in medical records may not be a problem if only one doctor uses the chart, but they can be a significant hazard for other physicians, nurses, or aides who must rely on the record to treat the patient. Misinterpretations of illegible orders in hospital charts have caused many serious and preventable patient injuries which led to malpractice lawsuits. Poor handwriting has subjected some physicians to time-consuming depositions or court appearance just to decipher their chart entries. Those who write illegibly should print. Special care should be taken in writing digits for vital signs or medications and decimal points. Hundreds of medication-related injuries have been traced to illegible orders or documentation of drug amounts dispensed. In a group practice in which other physicians must read their colleagues' office visit progress notes, a dictation system may be most advantageous and economically feasible. Typed progress notes tend to be more complete than handwritten entries.
- Incomplete questionnaires. Many physicians ask patients to complete medical information questionnaires which include space for past histories, allergies, medications, and other pertinent data. Physicians should review the patient's responses, taking particular note of significant positive reports. These should be addressed either in a progress note or on the form itself. On questioning the patient, the doctor may discover errors in the patient's answers. Blank spaces and question marks on the forms should be investigated. They may reflect the patient's inability to answer or confusion about the question itself. A space next to a question left blank by the patient never should be regarded as a negative answer. In one costly malpractice case, a patient said she did not write in her medication allergies on a questionnaire because she did not know how to spell them! Physicians should initial questionnaires as evidence that they have reviewed and considered the data. *(Medical Liability Monitor, Vol. II, November 4, 1986)*

PREMIUM RETURN APPROVED FOR MIIENJ 1978 POLICYHOLDERS

At the Board of Governors meeting of the Medical Inter-Insurance Exchange of New Jersey held November 12, 1986, the members voted for a refund of 10 percent of the paid 1978 premium to be paid to all 1978 policyholders, even if they no longer are actively insured.

This is the second such dividend directed by the Board of Governors. The first took place in 1982, returning 20 percent of the 1977 premium.

The refunds will be issued based upon the amount of paid 1978 premium, exclusive of carrying charges.

The Exchange is a not-for-profit reciprocal insurance company. All premiums not required to pay losses are to be returned to the policyholders. The nature of the type of insurance written by the Exchange makes the calculation of final losses a protractive process. It takes many years for most of the claims to be filed, and even longer to accurately assess what the overall premiums needed may be. Claims still are reported against the Exchange's first year (1977). The fact that claims still are filed means we still must keep the books open and prudent amounts in reserve.

At least annually, the Exchange reviews the status of each policy year and assesses the conditions suitable for a refund.

1987 RATES GO UP

The Governors directed the Exchange to set 1987 premium rates 9 percent higher for most policyholders. The principal reason for the increase, according to the Exchange's actuary, is the higher costs associated with paying claims. The average cost of settlement increased over 1985's level, and legal expenses to defend cases also rose. However, the number of new claims filed seems to have stabilized.

Obstetricians/gynecologists reclassified. Obstetrician/gynecologist claims and expenses have escalated disproportionately to the other surgical specialties, especially in the obstetrical field which possesses the most expensive claims. February 1, 1987, they will be reassigned to a new higher class established for their specialty alone. The net effect will be an increase of approximately 22 percent. Ob/gyn now is in Class K. Only two other specialties—orthopedic surgery and neurosurgery—will be paying an equal or higher rate after February 1987.

Others performing obstetrical work. The Governors recommended to scrutinize closely any losses arising from obstetrical services performed by family practitioners and general practitioners. These doctors are allowed to do nonoperative obstetrics on their general practice patients at a rate much below that of an ob/gyn. If the claim experience for this group becomes abnormal during 1987, serious consideration will be given to reclassifying this group upon renewal in 1988.

Rate rollback possible. The Board reiterated their concern for the passage of significant legislative reform. They concluded that such measures are the only way to achieve an immediate halt to the relentless need for premium increases which threaten the health care delivery system. Passage of the bills sponsored or supported by the Exchange would go a long way toward defusing the mounting crisis.

If a strong package of tort reform is enacted, the Board has authorized an immediate reflection of potential savings in the rates. This would mean the rate increase indicated for 1987 could be foregone.

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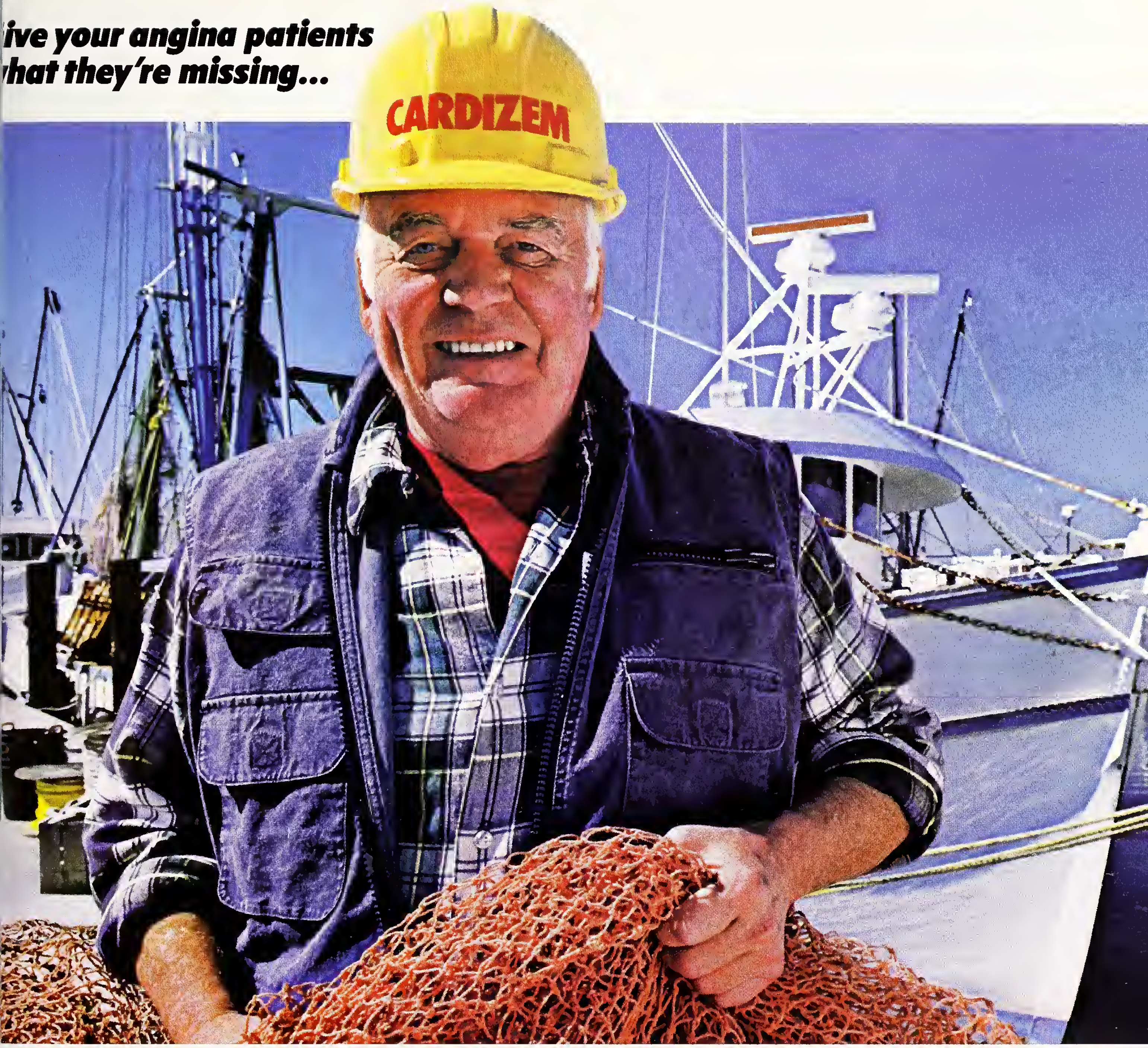

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***See Warnings and Precautions.**

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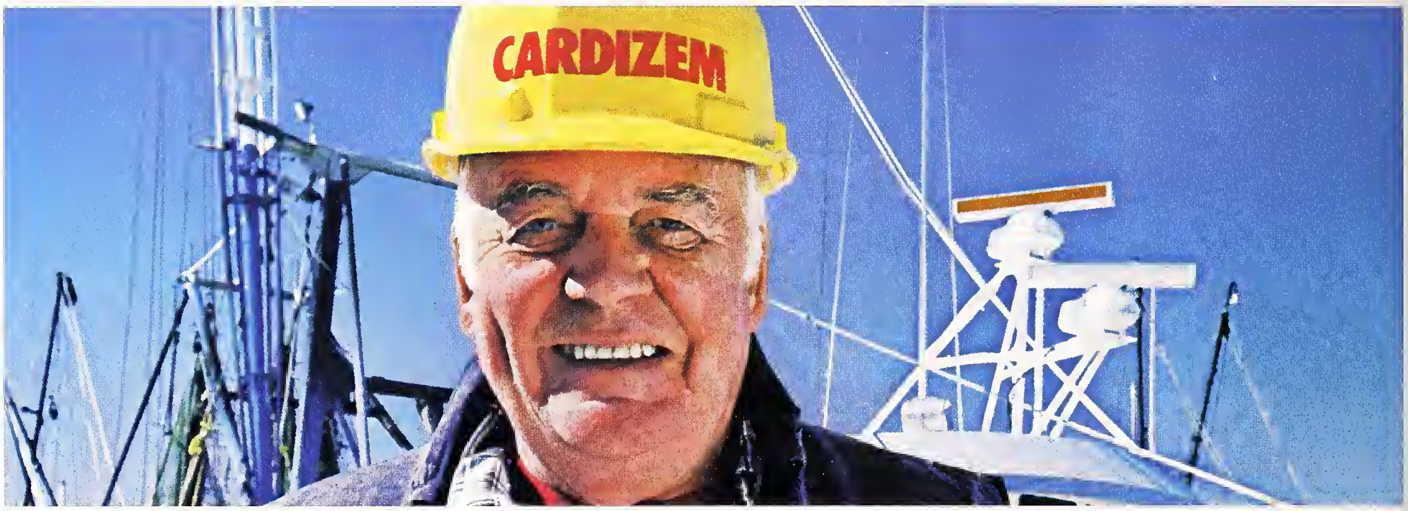

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CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

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COMPUTERIZATION OF THE MEDICAL OFFICE

PAUL J. HIRSCH, M.D., STUART A. HIRSCH, M.D., LYNN REEDMAN, C.M.A., ANDREW WEISS, M.D., BRIDGEWATER*

Increasing numbers of medical offices use computers for many reasons: to be up to date; to manage increasingly complex information; to follow changing regulations; and to take advantage of the decreasing cost of computers. Most computerized medical offices do billing only or tasks directly related to billing. This ignores the potential and promise of the computer. Advancing technology and lower costs have made fully integrated multi-tasking computer systems, which are capable of comprehensive information management, economically feasible. With the current state of the art, simple billing systems are virtually obsolete the moment they are purchased.

INTEGRATED SYSTEMS

An integrated comprehensive computer program is likely to provide the physician with many competitive advantages in today's difficult medical environment. These advantages include the ability to understand more fully and to obtain information about the practice; to provide coding and other information for insurance forms and for the government; and to retrieve and manipulate the information already available in the practice, to direct the growth of that practice, and to market the practice, if necessary.

THE SYSTEM

The system should be capable of supporting multiple terminals, multiple printers, and other devices. More than one terminal is desirable, so several people can enter or retrieve information simultaneously and it is probable that a busy practice will want more than one printer. A letter-quality printer is desirable for reports that will be leaving the office; a high-speed dot matrix printer is useful for billing. A very busy office may want to use a third printer, solely to produce insurance forms, while the patient still is in the office.

The system should support a modem, a device that allows the computer system to communicate with other computer systems. This will permit the office to access public data bases. The modem also will allow the vendor to access the program for modification, or to handle problems. Indeed, most difficulties that are encountered with a program can be corrected by the vendor's programmer over this telephone line.

STARTING UP

The first step in computerization of the medical office is for the physician to begin investigation of various programs. It is the program—the software—that is key to the use of the computer. The hardware—the computer—is of secondary importance. Most often, after identifying the most suitable program, the office will purchase that computer to run the program. It is important to obtain information about computer programs from as many sources as possible; most important is to speak with colleagues who are utilizing programs, as well as members of their staff. Observe the program in action; it will do only what you see it do, unless the program is modified.

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*Dr. Paul Hirsch is Chief of Orthopaedic Surgery, Somerset Medical Center and Clinical Associate Professor, Orthopaedic Surgery, UMDNJ-New Jersey Medical School. Dr. Stuart Hirsch is Attending, Orthopaedic Surgery, Somerset Medical Center. Ms. Reedman is Office Administrator and Computer Manager for Hirsch and Hirsch Orthopaedic Practice. Dr. Weiss is Professor and Chairman, Department of Orthopaedic Surgery, UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. Hirsch, Green Knoll Professional Park, 720 U.S. Highway 202-206, Bridgewater, NJ 08807.

The owner of a computer system is dependent upon the computer vendor for support, service, modifications, and enhancements. The company's interest in providing these, and ability to provide these, can best be determined by questioning their customers; this is a crucial step in determining the proper program. A vendor should be willing to make modifications in the program, so that the program can adapt to the office, rather than making the office adapt fully to the program. Enhancements, based upon advances in computer technology and improvements in programming, should be available at least annually; two or three times a year would be better. The vendor also must be willing to alter the programs, in accordance with changes in state, federal, and insurance regulations affecting medical practice.

Once the decision to purchase a computer has been made, and the vendor selected, careful attention must be paid to the contract. This contract always should be reviewed by an attorney.

Cost, of course, is a consideration. Nevertheless, the program that sounds quite expensive to the physician, may not be. The total cost should be considered a five-year investment. For most medical offices, it makes business sense to borrow money for the system, with a five-year repayment; or to arrange a five-year lease-purchase. On this basis, the monthly cost for the system and the service contract, for even "expensive" medical office systems, should be well within the budget of most medical practices. Indeed, it is probable that enhanced billing techniques and improved cash flow will pay for the system quite quickly.

When starting up, a computer manager should be designated. This should be a person within the office who cares about the process of computerization and is committed to it, understands the information generated by the computer and the retrieval of this information, and is responsible for presenting that information to the physician. In most instances, a physician will not have the time to spend on this, nor would it be economically appropriate for a physician to spend the required amount of time on this process.

Support from the vendor also is essential in starting up. The vendor must provide education and training for key employees. The vendor should provide one or more people on-site, immediately following the installation, for a minimum of one week; two weeks or more would be preferable. In part, these representatives will complete the education of the physician's staff. Equally important, their presence will give the staff the confidence that they need to use the system and to make it work. It is important to initiate the process slowly and gradually. There will be many phases to the integrated medical office computer program. It is not necessary to begin all aspects at once. It is best to begin with some segments and gradually introduce the remaining segments of the program, into the office procedures, over a period of months.

We have divided the many functions of an integrated system into three basic applications: business applications, medical applications, and appointment scheduling. It is important to note that these interrelate closely. Indeed, the fact that they do interrelate in actual practice makes it essential that they interrelate within the computer program also.

BUSINESS APPLICATIONS

For most offices, the business applications, particularly patient billing, must and will pay for the system. The first business application, however, and the first step when a patient enters the office, is registration. This is the process by which the patient's name and other important information is entered into the computer. With some systems, all of this data is entered as the patient is registered at the desk. In other systems, the data are entered at the end of the day. Information must include such basic data as birthdate, address, telephone number, and insurance information. The computer should assign an account number. In many practices, it may be important that the system have the capability to assign more than one account number for the patient, for different problems. This may become necessary when different events or illnesses are covered by different insurance companies. A good system will have no difficulty in tracking and maintaining separate accounts for the same patient.

This basic information should allow the computer to produce a "super bill" for the patient. Most offices now are using this super bill format to communicate services performed to the receptionist, and then for recording in billing. The patient should leave the office with a completed super-bill insurance form. The computer system also should have the ability to complete other insurance forms, such as those required under New Jersey no-fault laws.

The complete computer system also will include the CPT-4 and ICD-9 coding systems. All diagnoses and procedures should be coded automatically. At the present time, providing such code numbers on insurance forms, provides a more rapid response time from the insurance companies; and, it seems likely that full diagnostic and procedural coding will be required by all third-party carriers in the near future. Furthermore, coding makes it simple to track diagnoses and procedures for business or clinical purposes.

Even the most basic medical office computer systems have a good billing system. For some of these programs, billing indeed will be the primary or only function performed. An integrated system may or may not perform this in a better fashion for a given practice; but, it should integrate the information and allow ease of retrieval of practice information. Certainly, the billing process should be more efficient with a computer, save time, and produce better cash flow. A good system will initiate the billing process when "told" to do so by the computer manager. Many programs now will produce the bills, already within prestamped and sealed envelopes, and ready for mailing. In association with this, management reports on the accounts re-ceivable, are essential. This should provide breakdown into accounts of 30, 60, 90, and 120 days; and a careful analysis of the monies owed by insurance companies.

Management reports provide an analysis of referral sources and a breakdown of patients by zip code, age, or diagnosis. The reports similarly should provide average charges for each coded item, and the total monthly and year-to-date charges for these items.

The billing system should allow for tracking of in-hospital patients. The name of every patient seen in the hospital should be entered into the system each day. Charges should be entered automatically, but not billed until the patient leaves the hospital. This same process should produce a daily list of all hospital inpatients, whether on service or consultations, so that the physician has a current list of these each day.

All basic office systems should allow the production of mailing lists and labels. This usually will be a product of the registration system. Although many offices may not use a mailing list at the current time, increased competition and the need for marketing of medical practices may require this in the future. It would be useful for such functions as the mailing of a patient newsletter.

Other business applications which might be helpful to some offices include a system for management of accounts payable, inventory control, and a spread sheet program for further practice evaluation and projection analyses. Although the practice may not require all of these items at once, the capability must be there, if obsolescence is to be avoided.

MEDICAL APPLICATIONS

Word processing is essential for any office that produces long notes or reports. Integration of word processing into the computer system will have many advantages. A good word processing system should be easy to use, and should include a spelling checker, with the ability to add an unlimited number of words to the spelling checker. Some programs today will automatically enter any word that is not already included after first "asking" the transcriber to check the spelling. If this is part of the program, then the medical terminology peculiar to any specific practice is likely to be fully entered within a few weeks, without any effort on the part of the transcriber. A high-quality word processing system will reduce the time required to produce medical records, will improve the appearance of the records and of the reports, and will improve the morale of the transcriber.

In addition to the word processing capability, an integrated medical record program will store records and allow retrieval by diagnosis, procedure, or medication. It will assist with quality assurance and with patient management. The integrated medical records program should allow for a data base search, and for providing computerized summaries of the clinical practice.

A medical application provided by some of the better programs will allow direct access to drug information from the *United States Pharmacopoeia.* This information is quite readable; and it may be appropriate to provide printouts of this information for patients.

In addition, a drug interactions index is extremely helpful. When faced with prescribing a new medication for a patient already taking other medications, the physician can enter each of these into the computer and receive immediate information regarding any potential known interactions.

The system should allow the physician access to the public data bases that provide easy retrieval of extraordinary amounts of information.

A comprehensive program should allow the tracking of laboratory data, so that this information is not ignored inadvertently. This is particularly important in our litigious society. When laboratory tests are ordered and recorded as part of the medical record, or independently, they should be placed on a list which is produced regularly, until the information is received.

APPOINTMENT SCHEDULING

Appointment schedulers have been most difficult for computer programs to provide. Many offices have found these to be difficult and tedious, requiring more time for entry than their previous appointment system, and therefore, have preferred to avoid computerized appointment systems. Nevertheless, good appointment systems are available and provide important advantages for the practice.

The appointment system must be adaptable to an individual practice. The program should allow each practice to select the appropriate time intervals for each appointment and the numbers of patients to be seen within each time interval. The system should be capable of searching for an opening, in any one of several possible fashions: first available appointment; first available appointment for a specific physician within the practice; first available appointment on a Monday; first available appointment after 3:00 P.M.; and so on. It should provide this information with a minimum of effort on the part of the receptionist and should do so rapidly. If not, it simply will not work within a busy practice.

The appointment scheduling system should produce at least three daily patient lists for each office. The first, an alphabetized list, will make the pulling of records for the following day much easier. The second, the daily schedule, should be reproduced and kept at several locations in the office, to monitor patient flow. The third, a listing of the subsequent day's patients with telephone numbers, will help with reminder phone calls.

The appointment system also can be utilized to automatically produce reminder postcards for mailing several days prior to a scheduled appointment. The system should produce recall notices for patients who have missed appointments; it should provide a list of those patients for the physician and office manager.

The appointment system also can be utilized to produce patient recalls for routine re-evaluations. Finally, some offices have found it useful to monitor the daily appointment list, as an additional accounting check on the day's billing.

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SPONTANEOUS AORTOCAVAL FISTULA AS A COMPLICATION OF AORTIC ANEURYSM

JEFFREY KAUFMAN, M.D., LYLE BREEDING, M.D., NORMAN ROSENBERG, M.D., NEW BRUNSWICK*

An aortocaval fistula was found at the time of repair of a ruptured abdominal aortic aneurysm. Aortocaval fistula should be considered in any patient with high output congestive heart failure, peripheral venous hypertension, and abdominal bruit. Emergency surgery is a life-saving procedure.

In the modern era, most arteriovenous fistulas either are congenital, complications of invasive procedures, post-traumatic, or intentional, as in high-flow vascular access for dialysis. Spontaneous acquired fistulas are rare, and the most disastrous variety is due to rupture of an aortic aneurysm into a great vein. We report the management of this entity, aortocaval fistula.

CASE REPORT

A 62-year-old man with longstanding hypertension developed lower back pain and fatigue. In the emergency room, four hours after the onset of symptoms, he was lucid, diaphoretic, hypotensive (BP 90 systolic), and tachycardic. An expansile, tender, pulsatile, abdominal mass was readily palpable. Peripheral pulses were normal, as was the cardiac examination. A plain abdominal x-ray demonstrated calcification in the wall of a 12 cm abdominal aortic aneurysm. Fluid resuscitation was commenced and, within minutes of his admission, he was taken to the operating room, where celiotomy revealed obvious retroperitoneal hemorrhage from aortic rupture extending over the aortic bifurcation. Vascular clamping was performed at the level of the renal vein, which was divided for exposure, and at the common iliac arteries; systemic anticoagulation was avoided. With entry into the aneurysm, dark venous bleeding was noted through a 3 cm oval orifice along the right lower lateral wall of the aneurysm. The diagnosis of aortocaval fistula was made; vascular control was maintained by both digital insertion into the fistula and pressure on the vena cava with sponge sticks. Care was taken not to embolize debris into the fistula. The fistula was oversewn from within the aneurysm with running polypropylene suture; specific exposure of the vena cava was not necessary (Figure). The aneurysm was repaired by the inclusion (no resection) technique using a woven Dacron® bifurcation prosthesis with end-to-end anastomosis into the iliac arteries. As it was not possible to place a catheter in the pulmonary artery during the procedure, vigorous fluid replacement was given. Declamping hypotension did not occur and urine output was maintained during the reconstruction. A pulmonary artery catheter was placed immediately after the procedure in order to guide fluid replacement. The hospital course was uncomplicated and the patient was discharged on hospital day 8.

DISCUSSION

Aortocaval fistula is a rare manifestation of rupture of an aortic aneurysm, which usually is a catastrophic event. Only 50 percent of patients who are alive at

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*From the Department of Surgery, UMDNJ-Robert Wood Johnson Medical School. Correspondence may be addressed to Dr. Kaufman, UMDNJ-Robert Wood Johnson Medical School, Department of Surgery, CN 19, New Brunswick, NJ 08903.

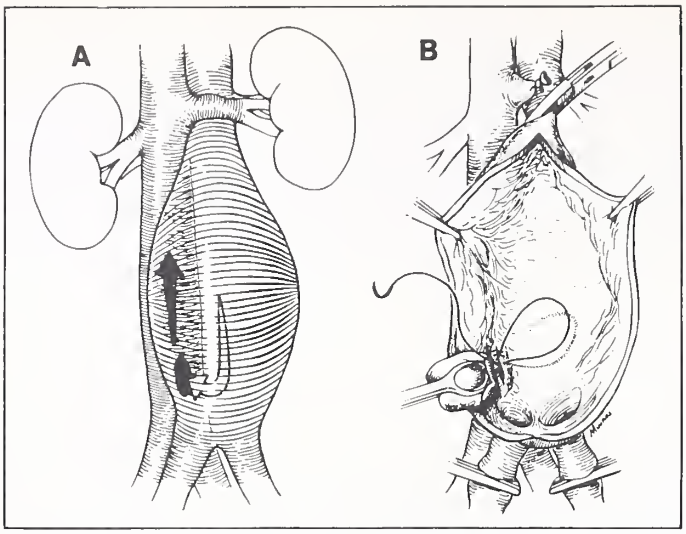

Figure A—Position of the aortocaval fistula. **B**—Operative technique: Control of the fistula by pressure with a sponge stick while oversewing the orifice with continuous suture from within the aneurysm.

admission with a ruptured aneurysm survive this complication. In comparison, elective repair of aortic aneurysms carries a mortality of 0 to 4.6 percent.[2] Approximately 100 cases of spontaneous aortocaval fistula from aneurysm have been described, beginning with the 1831 report of Syme.[3,4] This case is the third known by the authors to have occurred in New Brunswick in the last 30 years, an incidence approximating that reported by Debakey, 0.2 percent of surgically repaired aneurysms.[5]

The earliest surgical therapy of large arteriovenous fistulas evolved from the "Hunterian" quadruple ligation, where both vein and artery were ligated above and below the fistula. Applied to aortocaval fistula, it was evident that restoration of continuity to the great vessels was necessary in order to prevent peripheral arterial insufficiency or chronic venous hypertension. In the last decade, it has been recognized that the most expeditious repair is performed by oversewing the fistula orifice from within the controlled opened aneurysm.[6] Vascular control of the venous system is obtained by tamponade with sponge sticks or with intravascular balloon catheters.

Because of the acuteness of aortocaval fistula formation, our patient never manifested the cardiopulmonary complications of this disease. Characteristically for aortocaval fistula, the overshadowed initial symptoms of aneurysm rupture are followed by development of high output congestive heart failure, abdominal bruit or thrill, and lower extremity venous hypertension.[6] In an obese patient and in other patients whose abdomen is difficult to evaluate, failure to appreciate the significance of this clinical triad may lead to a prolonged, frustrating, and unsuccessful course of medical management, with early death from refractory congestive heart failure. Aortography is the method of choice for confirming and locating the site of established fistulas. Surgical management includes mandatory preoperative placement of a pulmonary artery catheter for monitoring fluid therapy; cardiac support may necessitate both parenteral digoxin and intravenous inotropic drugs. The typical surgical technique is that noted in the case report. An autotransfusion device is helpful for salvaging the blood loss at the time of initial control of the fistula. If ligation proves necessary for a complex fistula, particularly one in the less accessible iliac vessels, conventional extra-anatomic reconstruction techniques may be helpful for restoration of distal circulation.

CONCLUSION

Aortocaval fistula is a dramatic example of a spontaneous arteriovenous communication. Its initial presentation may be masked by symptoms of a ruptured aortic aneurysm, but the diagnosis should be considered in any patient with high output congestive heart failure, peripheral venous hypertension, and an abdominal bruit.

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A HOMOGRAFT VALVE BANK

LORENZO GONZALEZ-LAVIN, M.D., LYNN B. MCGRATH, M.D., DEBRA GRAF, R.N., BROWNS MILLS*

The first two implants of homovital aortic valves in the northeastern United States have been performed at Deborah Heart and Lung Center, which has established a homograft valve bank. It is imperative that the public be aware of the valve bank and the need for donor hearts.

Over the last two decades, aortic homograft valves have been established as the best valve substitute in young adults and children with complex congenital heart disease, particularly those with discontinuity between the right ventricle and pulmonary arteries. Based on the long-term results utilizing fresh and homovital aortic homograft valves, we have established a homograft valve bank at Deborah Heart and Lung Center.[1-9] Case reports describe the first two recipients to have benefited from this program.

CASE REPORT 1

A 40-year-old male with a heart murmur since birth was admitted to Deborah Heart and Lung Center in August 1985. His current symptoms began two years prior to admission with an acute anteroseptal myocardial infarction. Cardiac catheterization at that time revealed septal akinesis and a totally occluded left anterior descending coronary artery. The etiology of this obstruction appeared to be an embolus from a calcific aortic valve; he was treated with a streptokinase infusion. More recently, moderate exertion caused dizziness and dyspnea which was relieved by rest.

The patient was a tall, thin male without marfanoid features; a grade III/VI midsystolic ejection murmur was audible at the apex and aortic area. Peripheral pulses were of an anacrotic quality and were symmetrical.

The chest x-ray showed normal heart size and calcification of the aortic valve in the lateral view (Figure 1). Electrocardiogram revealed normal sinus rhythm and criteria of a remote anterior wall infarction. Cardiac catheterization demonstrated aortic stenosis with an 80 mm gradient and effective valve orifice of 0.61 cm2, mild aortic regurgitation, and poststenotic dilatation of the ascending aorta. The cardiac index was 2.9 and the calculated ejection fraction was 58 percent. Normal values are cardiac index 2-4 L/M/M^2 BSA and an ejection fraction of greater than 50 percent. The coronary arteries appeared normal with no evidence of the occlusion demonstrated previously.

At operation, the aortic valve was found to be bicuspid and severely calcified. The annulus measured 23 mm and accommodated a 21 mm homograft. The technique of insertion of the homograft has been described previously.[10,11] The aortic closure incorporated a Dacron™ patch to maintain proper anatomical distance between the noncoronary commissures to prevent valve incompetence.[12,13] The postoperative convalescence was uncomplicated. A two-dimensional echocardiogram performed seven days postoperatively showed a well-seated aortic valve with normal cusp

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*Dr. Gonzalez-Lavin is Chairman, Department of Surgery, Dr. McGrath is Attending Surgeon, and Ms. Graf is a Registered Nurse at Deborah Heart and Lung Center. Correspondence may be addressed to Dr. Gonzalez-Lavin, Deborah Heart and Lung Center, 200 Trenton Road, Browns Mills, NJ 08015.

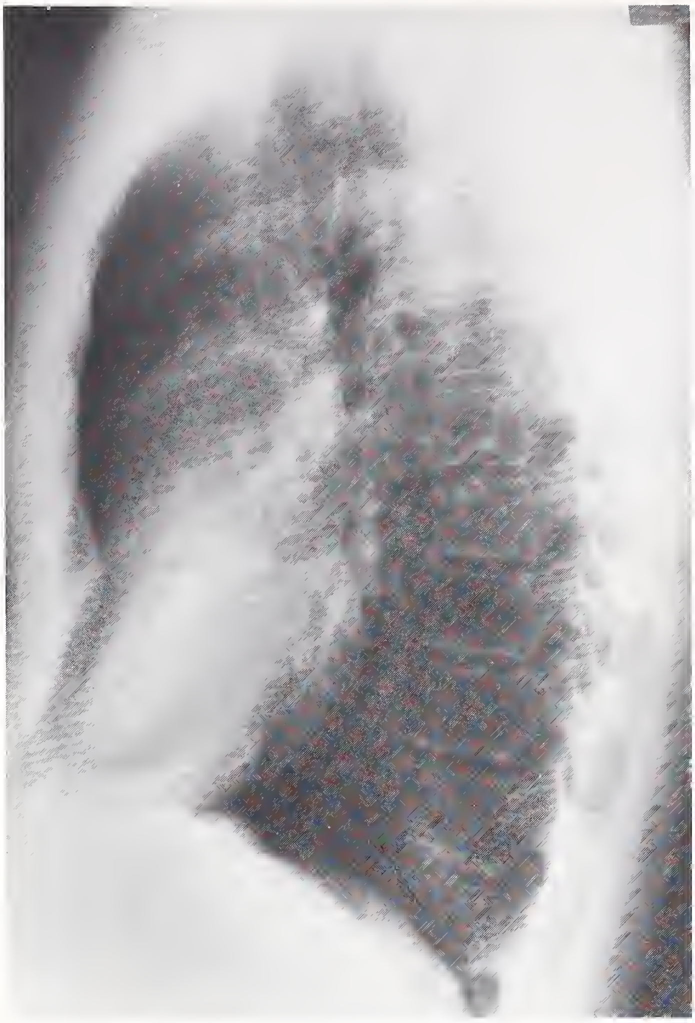

Figure 1—Left lateral chest x-ray showing calcification of aortic valve.

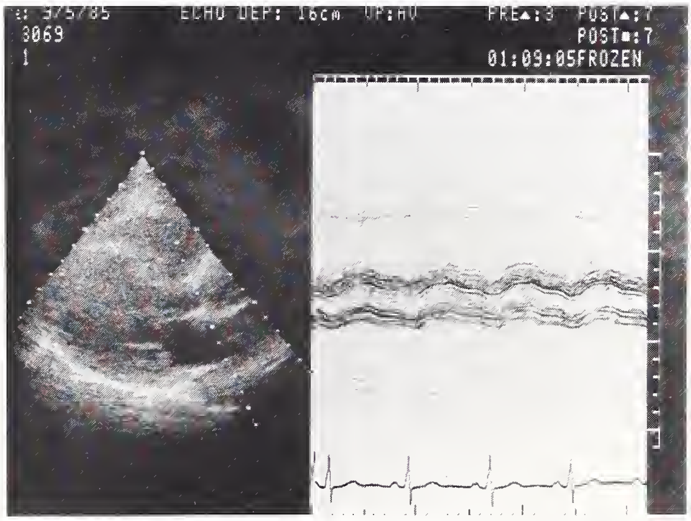

Figure 2—Two-dimensional echocardiogram showing well-seated aortic valve with normal cusp motion and no regurgitation.

motion and no regurgitation (Figure 2).

Three months after the implant, the patient returned to his job as a surveyor and was asymptomatic.

CASE REPORT 2

A seven-year-old boy was admitted to Deborah Heart and Lung Center in October 1985 for elective surgical correction of transposition of the great vessels, ventricular septal defect (VSD), and left ventricular outflow tract obstruction (LVOTO). Weighing 5¾ pounds at birth, he was cyanotic following a full-term uncomplicated pregnancy and normal vaginal delivery. Shortly after birth, he underwent a balloon atrial septostomy. At ten months of age, a right Blalock-Taussig shunt was performed. Since then, his growth and development have been grossly normal, but cyanosis increased and exercise tolerance diminished.

Physical examination revealed severe central cyanosis, grade III/VI systolic ejection murmur over the left sternal border, and a continuous murmur over the right precordium. The heart rhythm was regular; pulses were equal bilaterally, and the remainder of the examination was unremarkable.

The chest x-ray showed cardiomegaly. The electrocardiogram showed normal sinus rhythm with right axis deviation and right ventricular hypertrophy. Cardiac catheterization documented systemic pressures in the right ventricle, subpulmonary left ventricular outflow tract narrowing, and a large perimembranous VSD (Figure 3). A two-dimensional echocardiogram confirmed the diagnosis of transposition of the great vessels with VSD and LVOTO.

Through a midline sternotomy, the Blalock-Taussig shunt was closed and a Rastelli repair of the transposition was performed. An internal tunnel was made using a Tascon® Dacron™ baffle connecting the left ventricle to the aorta, after enlarging the VSD. A 19 mm homograft valve with 5 cm of ascending aorta was utilized to reconstruct continuity between the right ventricle and pulmonary arteries. A 20 mm spiral reinforced Gortex® graft was added proximal to the homograft to prevent compression of the valved extracardiac conduit by the sternum (Figure 4).

Postoperatively, the child developed a coagulopathy and was returned to the operating room for evacuation of clots. A viremia due to Epstein-Barr virus developed in the postoperative period. The patient recovered after appropriate medical therapy, including digoxin, and was discharged 27 days after surgery. Six weeks after surgery, the boy returned to school and was doing well.

DISCUSSION

The first successful implantation of a homograft aortic valve in the subcoronary position was performed in 1962 by Ross et al.[14] However, the methods of sterilization and storage at that time were found to be deleterious to valve durability, leading to early calcification and valve failure.[15,16] The inherent advantages of this valve substitute prompted investigators to pursue a more effective way to prepare and store these valves for clinical use. Through the efforts of the National Heart Hospital team in London, England, present storage methods of homograft valves do not significantly impair their viability, while preserving structure.[17-19]

Despite current technology, the use of homografts has been confined to only a few centers in this country, primarily because of the difficulty in procuring, processing, and maintaining an adequate supply of valves. With increased public awareness of the success of organ and/or tissue transplantation, we have been able to establish such a bank.

We are using two types of aortic and pulmonary valve homografts: those obtained from brain-dead donors (homovital), and those procured within 48 hours of death (fresh). The aortic and pulmonary valves and a segment of artery are dissected as conduits from the heart using sterile techniques under a laminar flow hood. After measuring the size of the annulus and length of arterial vessels, the necessary cultures are obtained. The dissected homografts are stored in an antibiotic-nutrient medium (RPMI 1640, fetal calf serum, DANYNM®) at 4°C.[20,21] After 48 hours, valves again are cultured and transferred to a freezing solution (RPMI 1640, fetal calf serum, dimethylsulfoxide), and frozen in a controlled rate liquid nitrogen freezer. The valves then are stored at -196°C.[22]

A homograft can be trimmed for a freehand insertion in the aortic position (as in our first patient), used as a conduit in correction of complex congenital heart defects (as in our second patient), or mounted on a stent for use in an atrioventricular position.

Reports have shown that for the last 17 years, although a steady attrition of valves occurs, actuarial curves compare favorably with other types of valve substitutes.[23] The homograft is the best available option for candidates for valve replacement needing the durability of a mechanical prosthesis without the risk of anticoagulation, i.e. young adults.

In one report, 80 percent of the patients undergoing isolated aortic valve replacement were alive and retained the original homograft after six years. Freedom from valve failure has been 90 percent at five years and 72 percent at ten years. The mean rate of valve degeneration (leaflet attenuation, rupture, or calcification) has been 1 percent per year during the first five years, 2 percent between years five and eight, and 5 percent per year after year nine of implantation. Functional evaluation at ten years disclosed good results in 82 percent of patients.[1]

Yacoub and associates have reported a series of 379 patients undergoing mitral valve replacement with aortic homograft valves, again with results comparing favorably to other valve substitutes. Freedom from intrinsic valve failure was 97 percent at five years, 82 percent at eight years, and 48 percent at ten years. Freedom from thromboembolism at five years was 98 percent and at ten years it was 97 percent without the routine use of anticoagulants. Actuarial survival at three years was 83 percent, at five years 75 percent, and at nine years, 55 percent.[4]

Recent reports of correction of congenital malformations utilizing homografts as valve-bearing conduits have been impressive and continue to be at this time the preferred valve substitute in the operative correction of these anomalies.[5] The largest experience, Stark and deLeval, reported 200 cases. There was only one instance in which a patient required reoperation because of stenosis of a calcified homograft valve. In general, the aortic wall becomes calcified within the first two years after implantation, sparing the valve leaflets which usually continue to function well with a very low incidence of residual gradients.[5]

In a similar experience, Kay and Ross reported on 97 conduits used to reconstruct the right ventricular outflow tract in patients with congenital malformations between 1966 and 1983.[9] Eighty-seven percent of the conduits continued to work well at ten years. The main problem in three conduits with significant gradients was the formation of pseudointima at the adjacent Dacron™ tube used in conjunction with the homograft, rather than calcification of the valve leaflets.

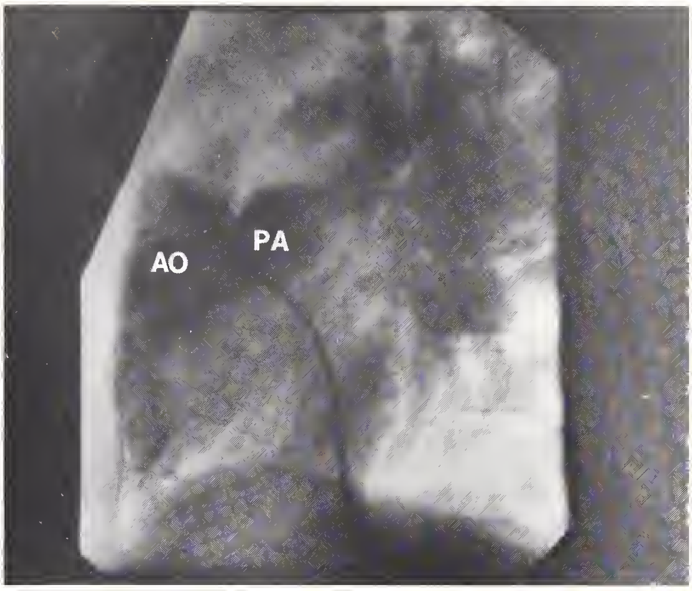

Figure 3—Angiogram in LAO view with catheter in the right ventricle (AO = aorta; PA = pulmonary artery).

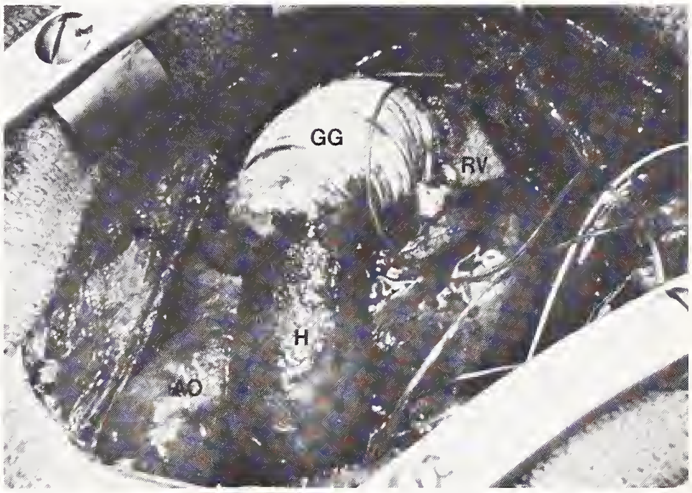

Figure 4—Completed repair (AO = aorta; H = homograft; GG = Gortex® graft; RV = right ventricle).

Homograft valves and conduits have other clinical applications, such as in aortic root replacement,[24,25] and in aortic valve replacements utilizing autologous pulmonary valve to reconstruct the right ventricular outflow tract.[26-28] Future research in homograft valves includes further studies in the viability and structural integrity of stored tissue, and the assessment of the extent and possible reduction of antigenicity.

SUMMARY

Homograft aortic valves are a preferred method of valve replacement in young adults and children due to: 1) perfect hemodynamics; 2) lack of hemolysis; 3) absence of thromboembolism without the use of anticoagulants (hence no anticoagulant-related hemorrhage); and 4) the virtually nonexistent threat of sudden valve failure. Long-term durability is comparable or superior to present mechanical prostheses. As a valve-bearing conduit, a homograft offers the best durability when used for correction of congenital cardiac malformations in children. In terms of quality of life, the homograft offers incomparable advantages for suitable candidates.

ADDENDUM

Since submission of this manuscript, three additional patients have received homovital valves; two patients were 40-year-old women receiving aortic valve replacements, and for the first time in this country, a pulmonary valved conduit was used to reconstruct the right ventricular outflow tract in a 9-year-old boy.

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ASSOCIATES IN SEX AND MARITAL THERAPY

• • •

Richard M. Samuels, Ph.D.
Diplomate, ABPP, Fellow, A.P.A.
Clinical Instructor, Dept. OB/GYN
New Jersey Medical School

•

Daniel N. Watter, Ed.D.
Board Certified Sexologist, ACS
Clinical Member, AAMFT

•

Martha Calderwood, M.A.
Deputy Director of Education,
Human Sexuality Program, Dept. OB/GYN
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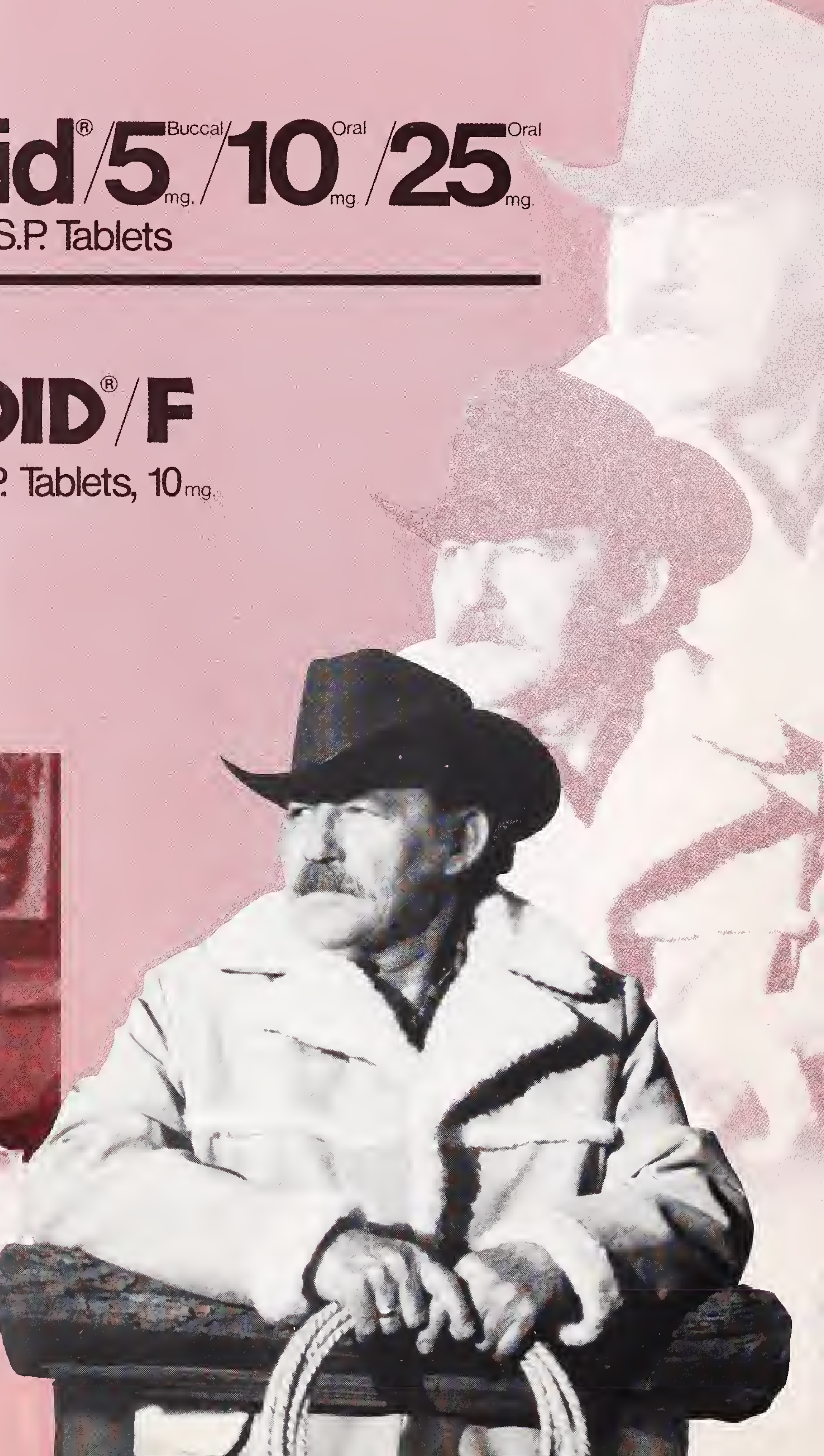

STATE OF THE ART: THE ENTEROCOCCUS—BACTERIAL PATHOGEN OF THE 1990s

LEON G. SMITH, M.D., NEWARK*

Enterococcal colonization has increased considerably during the past five years, and the isolation of this organism cannot be dismissed as we have done in the past.

Antibacterial chemotherapy drastically has altered the bacterial flora on earth forever and ever. During this unprecedented era, man has enjoyed a longer and healthier life thanks to better control of pneumonia, septicemia, urinary tract infection, meningitis, cellulitis, and osteomyelitis. *Streptococcus pneumoniae*, Group A streptococci, and *S. aureus* bacteremia are under reasonable control at this moment. Now, through a selective process and the pressure of antibiotic fallout, the emergence of multiresistant *Pseudomonas aeruginosa*, enterococcus, *Klebsiella*, *Serratia marcescens*, *Acinetobacter*, J.K. diptheroids, and *Brahmanella catarralis* have created new challenging problems for physicians and scientists of the 1990s.

Of these organisms, the enterococcus Group D streptococcus is the least understood and most puzzling, since it is part of the normal gut flora. The enterococcus naturally is resistant to most antibiotics and readily accepts plasmid-mediated resistance. In the past, the enterococcus was known for its ability to cause serious endocarditis and a less serious urinary tract infection. It was less capable of causing peritonitis, endometritis, vaginitis, osteomyelitis, or cellulitis.

Since cephalosporins have become the primary prophylactic antibiotics of choice for most surgery, enterococcus colonization has increased in cesarean section from 13 to 55 percent in the cefoxitin-prophylactic-treated group. Fortunately, the evidence of superinfection from the colonized enterococcus still remains at a low rate. When added to other organisms, enterococcus enhances abscess formation and increases morbidity. Of the Group D streptococci, *Streptococcus faecalis* is more frequent than the more resistant *Streptococcus faecium*. Some viridans group cross react with Group D antiserum. Hence, Group D streptococcus are overreported.

The primary source of the enterococcus remains gastrointestinal tract lesions followed in descending order by cardiovascular infections, surgical drainage sites, urological manipulations, and neurosurgical operations. The incidence of enterococcal bacteremia is enhanced by previous antibiotic use, intravascular lines, and intestinal operations. The outcome for enterococcal bacteremia is less than satisfactory because the patients are generally very ill. A cell wall antibiotic, namely ampicillin or vancomycin, is needed plus an aminoglycoside to produce synergy to eradicate the enterococcus.

SUMMARY

Enterococcal colonization has increased considerably during the past five years, and the isolation of this

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*Dr. Smith is Director, Department of Medicine, Saint Michael's Medical Center. Correspondence may be addressed to Dr. Smith, Saint Michael's Medical Center, 268 Dr. Martin Luther King Jr., Blvd., Newark, NJ 07102.

organism merely cannot be dismissed as we have done in the past. Colonization precedes infection. Since enterococcal bacteremia and other forms of such infection are difficult to eradicate, constant hospital surveillance is in order with special adjustment of prophylactic antibiotic use and special care of nosocomial entrance sites to prevent serious superinfection which has a high morbidity and mortality. Hence, we have a new challenge for the 1990s. It is everyone's problem—a problem produced by modern therapy.

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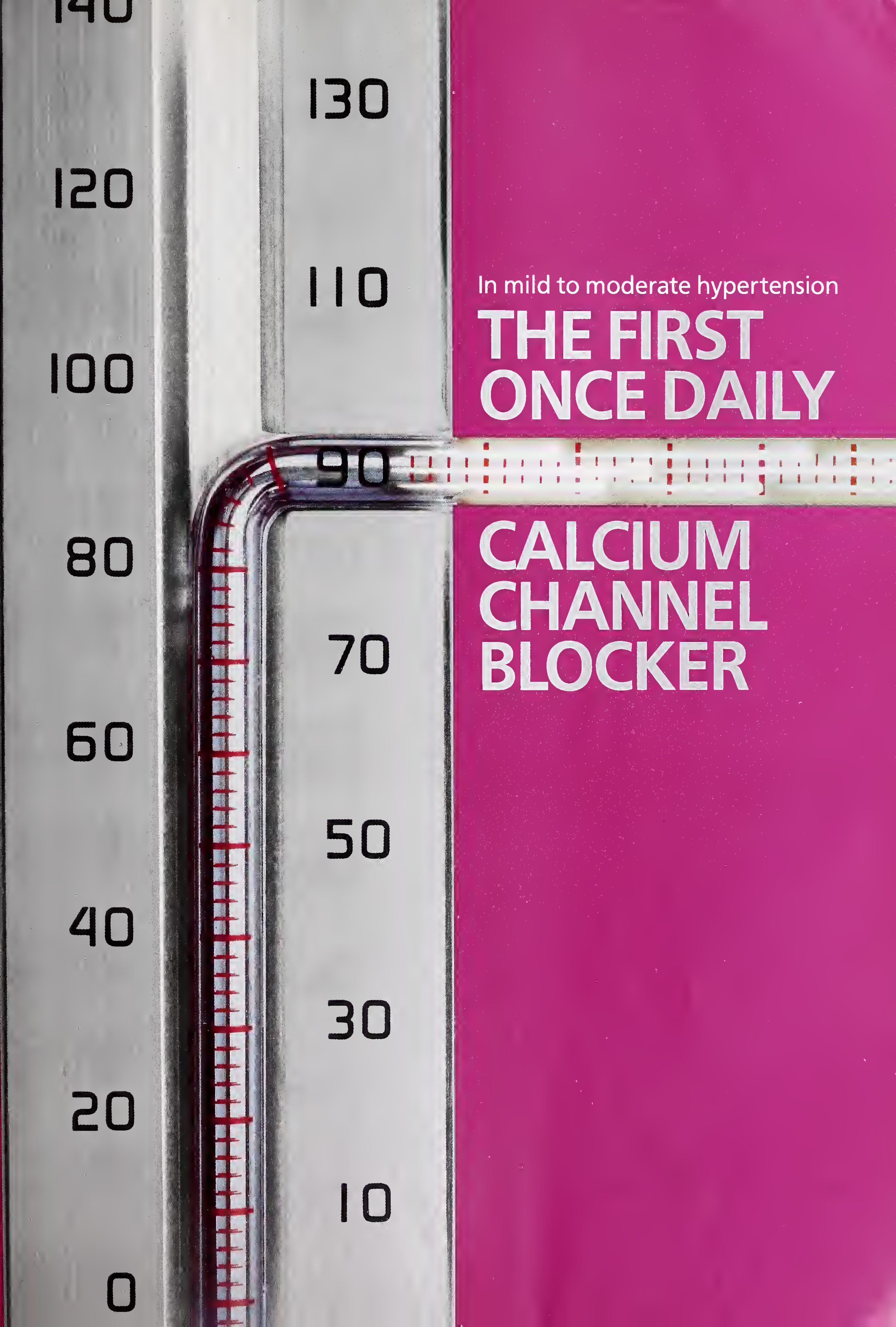
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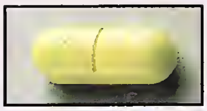

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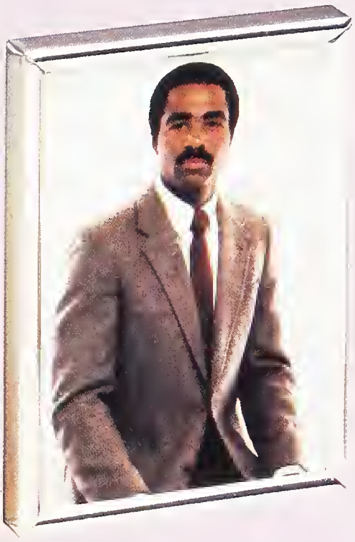


JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

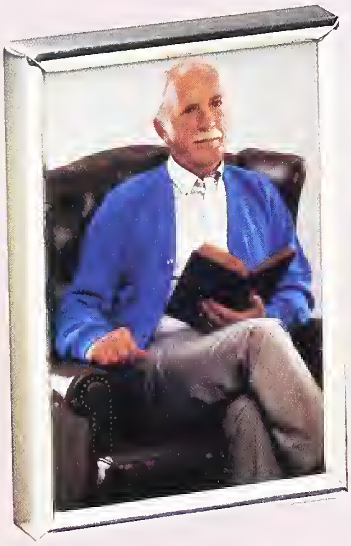
- Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
- Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
- Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
- Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN does not cause urinary urgency.
- Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
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CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

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STATE OF THE ART: THE TUMOR REGISTRY, THE COMPUTER, AND LUNG CANCER

GEORGE J. HILL M.D., SHIRLEY COOK, B.A., AVRAM RUDITZKY, NEWARK*

Computerization of a hospital tumor registry simplified the analysis of patterns of case and outcome. In 129 cases of lung cancer, the overall use of triple modality therapy increased, and there was improvement in the survival of patients with distant and disseminated disease.

As director of a hospital tumor registry, I am always interested in finding ways to learn from the registry's data and to let the registry's data teach us things that we can pass on to others. It occurred to me that we might take a look at our tumor registry and ask some straightforward questions, focusing on our most common type of cancer—carcinoma of the lung. Specifically, we can ask how we are treating the patients, and what is the outcome? Hopefully, we might see three hypotheses confirmed: (1) an increase in accessions as our cancer center is developing; (2) an increase in multimodality therapy, particularly for distant/disseminated lung cancers; and (3) an increase in at least short-term survival in these cases.

MATERIALS AND METHODS

The University Hospital Tumor Registry is fully computerized; all the data are recorded on abstracts and are entered in the computer. The data can be displayed in 44 different ways by our registry's computer program. For this analysis, we looked at treatment with surgery (S), radiation therapy (R), and/or chemotherapy (C) in the 129 analytic cases treated in the most recent three-year period for which full data is available (1981 to 1983). "Analytic" cases are those in which the major primary treatment was given at University Hospital. Between 1981 and 1983, we did see an increase in the number of cases admitted. In the first two years, accessions were stable, 38 cases and 35 cases, respectively, and there was an increase in the third year to 56 cases. In 1982, the medical oncology department recruited a full-time chief and in 1983 the Radiology Oncology Center opened at University Hospital.

With respect to the stage, the distant/disseminated group represents about 50 percent of the total number. Surgery is the most common form of treatment used in our cancer patients, and surgery alone was used in percentages ranging from 23 to 44 percent in our lung cancer patients.

This report will display the methods of therapy in a new graphic format, using the model shown in Figure 1; this figure represents a hypothetical population of 100 patients. The 100 patients were plotted on a piece of paper, in a circular area of exactly 100 square cm. For example, if there were less than 100 patients, the total circle would be smaller and if there were more than 100 patients, the total circle would be larger. One simply uses plane geometry and calculates

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*From UMDNJ-New Jersey Medical School where Dr. Hill is Professor of Surgery and Chief, Division of Surgical Oncology. This paper was supported in part by the National Cancer Institute Clinical Cancer Education Grant NCI R25 CA19536 and a Research Award from the Veterans Administration. Correspondence may be addressed to Dr. Hill, UMDNJ-New Jersey Medical School, Room MSB, G595, 100 Bergen Street, Newark, NJ 07103.

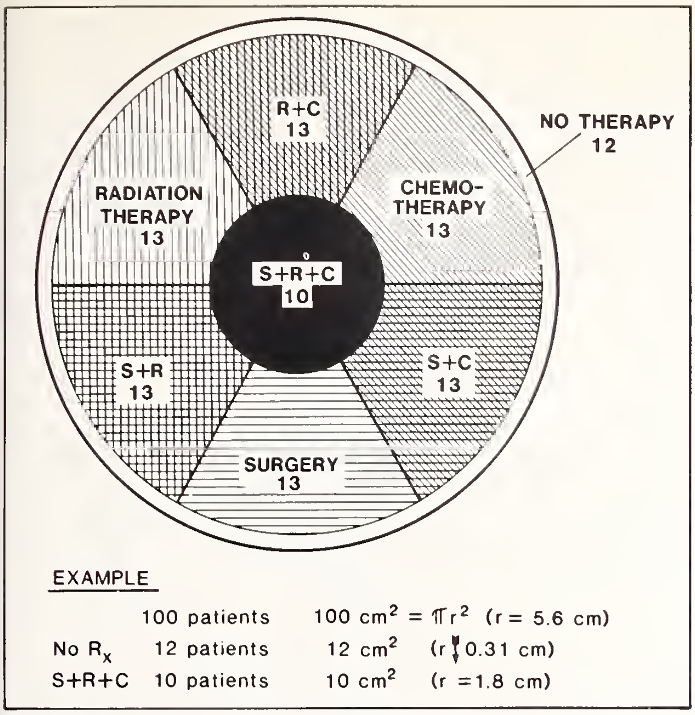
R+C
13
NO THERAPY
12
RADIATION
THERAPY
13
CHEMO-
THERAPY
13
S+R+C
10
S+R
13
S+C
13
SURGERY
13
EXAMPLE
100 patients   100 cm^2 = πr^2 (r = 5.6 cm)
No R_x 12 patients   12 cm^2 (r $\updownarrow$ 0.31 cm)
S+R+C   10 patients   10 cm^2 (r = 1.8 cm)

Figure 1—A model diagram used to illustrate therapy.

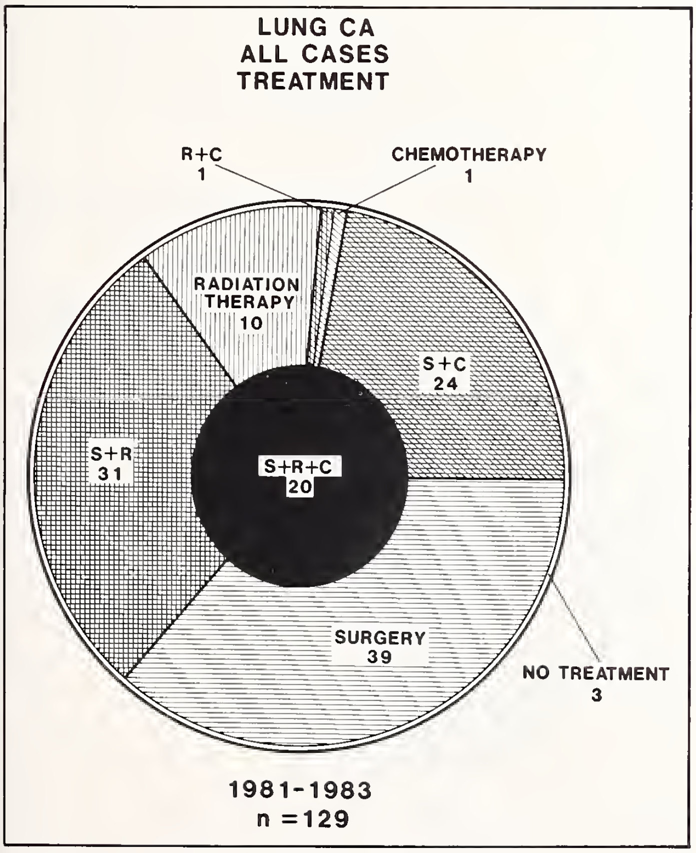

Figure 2—Treatment for 129 analytic cases of lung cancer treated from 1981 to 1983.

the radius of the circle based on the formula for the area of a circle (πr^2). The data can be displayed most effectively in color, because there actually are eight different types of therapy. The three primary modalities can be displayed in the three primary colors, and combinations of modalities are shown in secondary colors. If no therapy is given, the area is white, and if all three methods are given, the area is black.

RESULTS

Of the total of 129 cases, 114 were treated with surgery (Figure 2). About one-third were treated with surgery alone, about one-third were treated with surgery plus radiation therapy, and a few less were treated with surgery plus chemotherapy. One patient was treated with chemotherapy alone, 1 patient was treated with radiation and chemotherapy, 10 patients were treated with radiation therapy alone, and 20 patients were treated with a combination of the three methods. Three patients had no treatment. The area of each section is proportional to the total number of cases in the section. In 1981, there were only 38 new cases admitted (Figure 3), so the circle was smaller and only 2 cases received all three methods of therapy. About

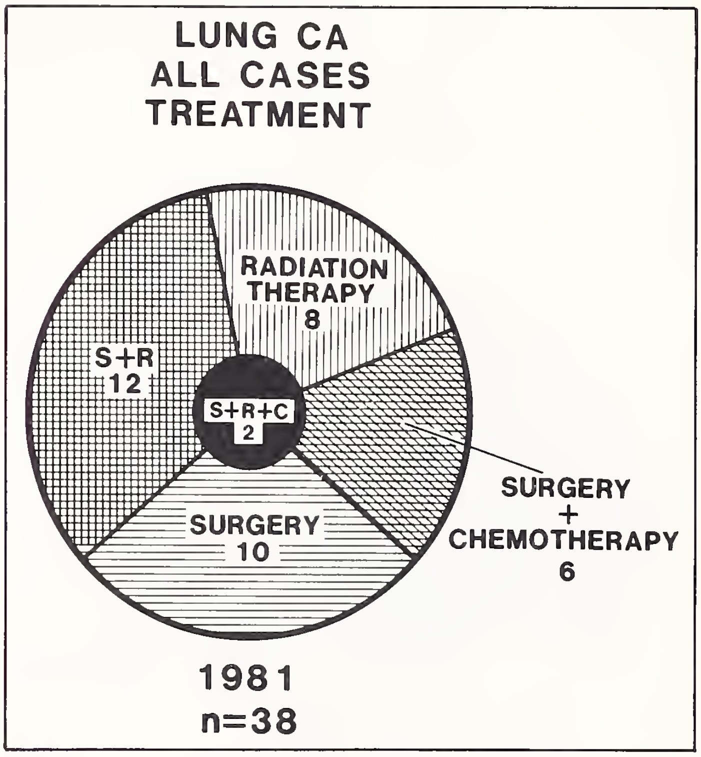

Figure 3—There were 38 analytic cases of lung cancer treated in 1981.

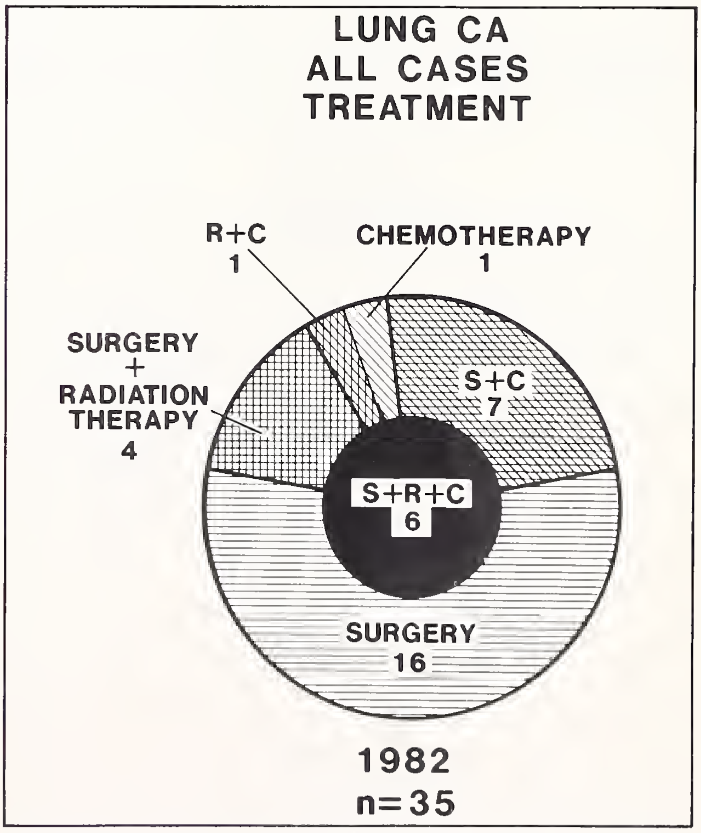

Figure 4—There were 35 analytic cases of lung cancer treated in 1982.

one-third of the cases were treated with surgery alone, and about one-third of the cases were treated with surgery and radiation. None was treated with chemotherapy alone in 1981. In 1982, the circle is a little smaller, since only 35 patients were accessioned (Figure 4). One patient received chemotherapy alone and about half the patients were treated with surgery alone. Combinations of therapy were used more frequently in 1982. In the third year, 1983, the area of the circle was larger because of the increased number of accessions (Figure 5). About one-fourth of the patients were treated with surgery alone, while surgery, radiation, and chemotherapy became more common as the radiation therapy center opened at the hospital.

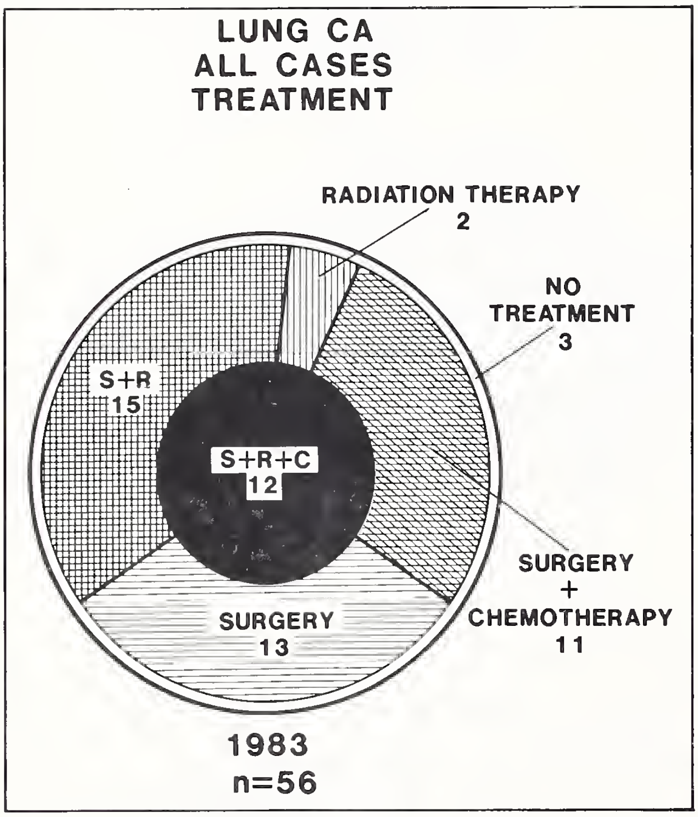

Figure 5—There were 56 analytic cases of lung cancer treated in 1983.

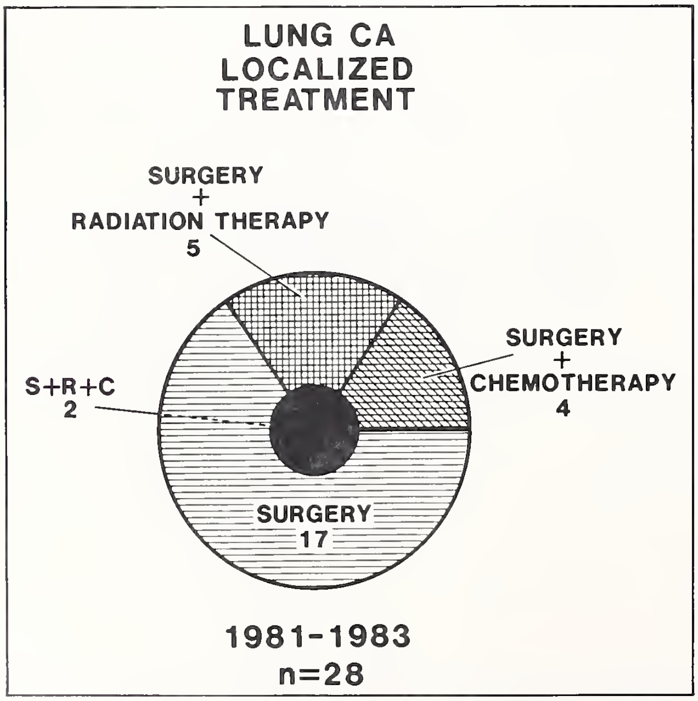

Figure 6—Localized lung cancer in 28 cases, from 1981 to 1983.

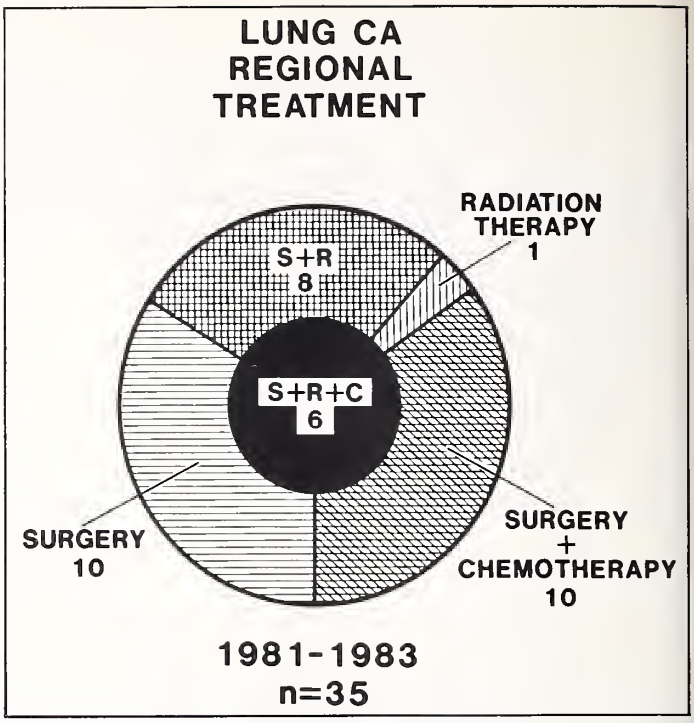

Figure 7—Lung cancer with regional spread in 35 cases from 1981 to 1983.

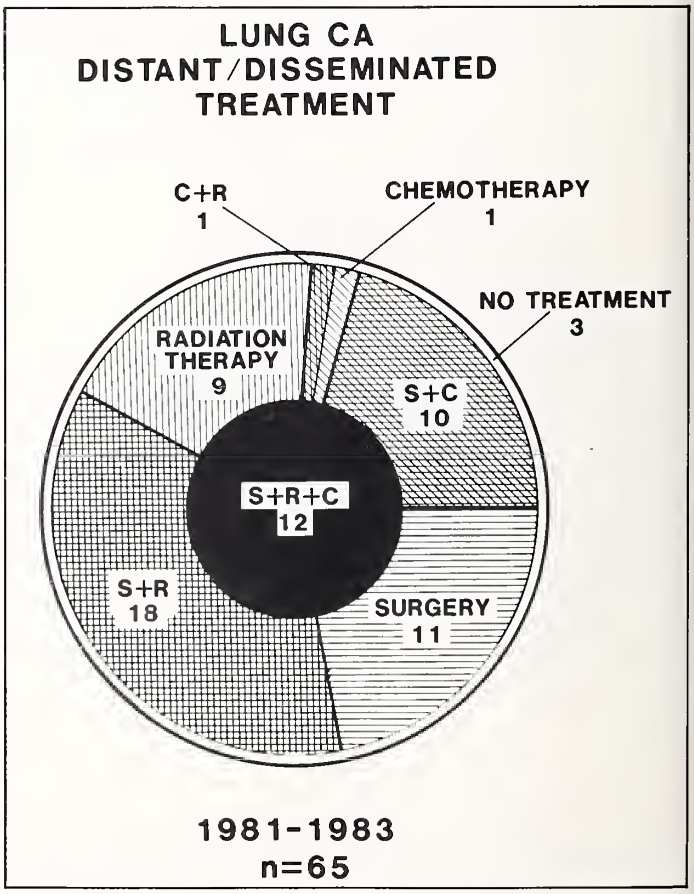

Figure 8—Distant/disseminated lung cancer in 65 cases from 1981 to 1983.

Localized lung cancer was treated mainly by surgery in our institution, as would be expected (Figure 6). A few patients were treated with surgery plus radiation, and a few patients were treated with surgery and chemotherapy. For lung cancer with regional spread, about one-third were treated with surgery alone—a smaller proportion than in the localized cases—and a larger proportion were treated with all three modes of therapy (Figure 7). In the group with distant/disseminated disease, about one-fourth were treated with surgery alone, a smaller proportion than in those with

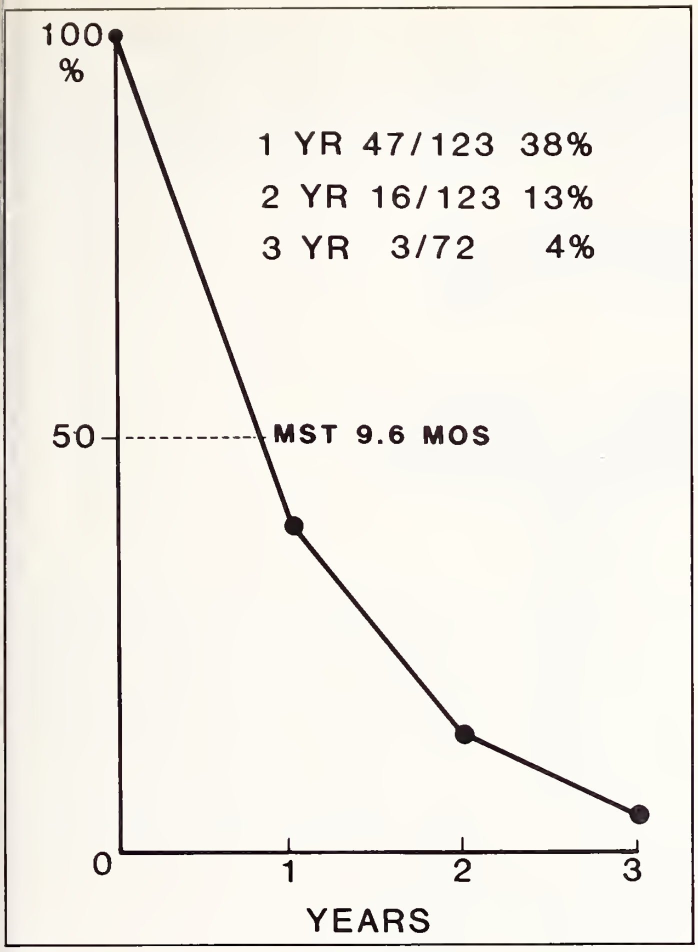

Figure 9—Actuarial lung cancer survival in 129 analytic cases.

less advanced stages (Figure 8). Three modes of therapy were used in even more of these cases.

The proportion of patients who received three modalities of therapy increased from only 6 percent in 1981 to 21 percent in 1983, the overall average being 16 percent. In the cases with distant/disseminated lung cancer, unimodality therapy decreased during this three-year period from 46 percent in 1981 to 20 percent in 1983. Lung cancer survival is poor in our hospital, as it is in many others, with a median survival time of 9.6 months: the one-year survival is 38 percent, two-year survival is 13 percent, and the three-year survival is 4 percent (Figure 9). However, the one-year survival rate is improving. Cases admitted in 1981 had a one-year survival of 28 percent, while in 1982 and 1983 the one-year survival improved steadily, to 41 percent and 45 percent, respectively. It is unknown if a plateau in survival will be reached in the near future, but there has been a distinct increase in one-year survival in each of the past three years. Looking specifically at the 65 cases with distant/disseminated disease, the median survival time was three months for the 21 patients treated with only one mode of therapy, whereas it is eight months for the 41 patients who were treated with multimodal therapy, i.e. two or three modes of therapy. There were 3 patients alive in each group at the time of analysis of the data.

DISCUSSION

Information which was acquired prospectively by the hospital tumor registry and stored in a computer-based system was simple to review and of interest to the hospital staff. Patterns of care can be studied by the use of this data. Similar types of data now are being obtained in all hospitals in New Jersey, as the result of state law and regulations that mandate accessioning and annual followup of all cancer patients diagnosed in New Jersey hospitals. Similar studies thus could be conducted with relative ease by any hospital cancer committee.

The cause-and-effect relationships suggested by our three hypotheses cannot be confirmed by this analysis alone. Additional multivariate analysis would be needed to determine if other factors relate more strongly to survival than the number of therapeutic modalities used. For example, cell type, degree of differentiation, host status (performance), amount of weight loss, duration of symptoms, age, sex, and associated pulmonary disease all are believed to play a role in survival of patients with lung cancer. Not all of these variables are abstracted, and not all of the abstracted items are sorted by our registry's computer program. Further analysis of the data to examine these variables, and others, is indicated clearly in the years ahead. Changes in therapeutic modalities, e.g. with more powerful radiation therapy, intraoperative radiation, and new chemotherapeutic combinations, also may lead to changes in the outcome from therapy. A larger data base and additional years of followup will be needed to draw firm, statistically based conclusions. The data presented here should be regarded only as preliminary and suggestive.

CONCLUSION

We conclude that accessions of lung cancer patients have increased recently; we now are seeing more patients with advanced lesions; combination treatment is being used more often in our hospital; survival is poor but appears to be improving; and distant/disseminated disease survival is longer in cases treated with multimodality therapy than unimodal therapy.

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ADVANCES IN CANCER: ALPHA INTERFERON THERAPY IN HEMATOLOGIC MALIGNANCIES

PATRICIA KEEGAN, M.D., AND HOWARD OZER, M.D., PH.D., CHAPEL HILL, NORTH CAROLINA*

Interferons, glycoproteins secreted by leukocytes in response to viral stimuli, demonstrate antiviral and antitumor activity. Subtypes of alpha interferon produce responses in several malignancies, particularly lymphoproliferative. Dramatic responses in hairy cell leukemia appear to result from direct effects rather than via immunologic reconstitution.

The interferons are a group of glycoproteins secreted by leukocytes as well as other cells in response to viral infection and other stimuli. They are differentiated into alpha, beta, and gamma or type I and II interferons on the basis of antigenic specificity, physical and chemical characteristics, primary cell of origin, and specific cell receptor sites. All interferons have two broad areas of activity in common; antiviral and antiproliferative activity.

Interest in the interferons as antitumor agents, postulated on the basis of direct antiproliferative properties and/or via augmentation of host immune responses, began in the 1960s. The development of recombinant DNA engineering techniques in the 1970s greatly accelerated this research with the mass production of relatively inexpensive high purity interferon preparations. Clinical research has been conducted predominantly with recombinant subtypes of interferon alpha. Early phase I testing with beta and gamma interferon show qualitative similarities in toxicities but efficacy has not been clearly defined. Significant responses have been reported in malignant melanoma, renal cell carcinoma, and Kaposi's sarcoma. However, the greatest activity has been in lymphoproliferative malignancies, particularly hairy cell leukemia.

In hairy cell leukemia, a rare B-lymphoid malignancy, low-dose interferon given on a daily or thrice weekly schedule, IM or SC, has produced dramatic responses of 75 to 100 percent with minimal toxicity as opposed to splenectomy or chemotherapy. The mechanism of action of interferon remains undetermined. The clinical response parallels or precedes augmentation of host immune defenses, such as enhanced natural killer cell activity and resolution of monocytopenia. This suggests a more direct effect of interferon on the malignant B-cell population.

THE PRODUCTION OF INTERFERONS

Interferons are produced by several cell types in response to a variety of inducers or stimuli. The classical stimulus is the infection of a cell with a nonlytic virus.[1] The interferons can be classified into three types based on antigenic specificity: alpha (leukocyte), beta (fibroblast), and gamma (immune). While particular cell types appear to secrete a predominant type of interferon (alpha, beta, gamma), when cells are stimulated in vitro or in vivo, a number of different lymphokines and a combination of additional interferons are secreted in smaller quantities. Leukocytes and B lymphoblastoid cell lines secrete alpha interferons preferentially, while fibroblasts secrete predominantly beta, and T lymphocytes secrete predominantly gamma. The interferons also can be categorized into type I and type II interferons. This distinction originally was made in the mouse interferon system with type I interferons being those secreted in response to viral inducers and type II in response to "immune" inducers.[2] Type I and II interferons also differ in physical and chemical characteristics and are recognized by different receptors on the cell surface. The type I interferons, which include the alpha and beta types, appear to have more potent antiviral activity while the type II (gamma) interferons have more potent antiproliferative activity.[3]

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*From the University of North Carolina at Chapel Hill. Correspondence may be addressed to Dr. Ozer, University of North Carolina at Chapel Hill, Department of Medicine, Division of Medical Oncology, Chapel Hill, NC 27514.

Clinical investigation of the interferons has focused on two broad areas of activity, antiviral effects and antitumor or antiproliferative effects. The antiviral properties of the interferons were described first and it is on this basis that the potency of different interferon preparations generally is quantitated.[1,4] There are a number of assay systems that assess viral infection of cells through cytopathic effects or cell lysis. Variations of the plaque assay are the most widely used.[5] In these systems, the potency of an interferon preparation is determined by the dilution required to reduce viral infection (denoted by cell lysis) to 50 percent of control values. Activity is expressed as units per milligram of protein. The antitumor activity of an interferon preparation does not correlate directly with its antiviral activity; however, no other satisfactory method of quantifying the interferons' antiproliferative activity yet has been described.

MECHANISM OF ACTION OF INTERFERONS

The mechanisms of action of interferon responsible for antitumor activity remain undefined. Myriad alterations of cellular function have been demonstrated in vitro including alteration of protein synthesis both qualitatively and quantitatively through the induction of cellular enzymes, changes in immunoglobulin synthesis, and in the type and distribution of cell surface markers and direct inhibition of cell growth in culture.[6-9] The interferons also have been shown to have a variety of immunomodulatory effects, such as augmentation of natural killer cell activity, enhancement of macrophage phagocytosis, enhancement of proliferation and cytotoxicity in mixed lymphocyte cultures and either restoration or further derangement of T cell subset imbalances.[10-12] Both direct effects on cellular function resulting in impaired proliferation and indirect effects via stimulation of host immune defenses have been proposed as the mechanism of action of the interferons in malignancy.

Theories regarding the mechanism of the interferons' antiproliferative activity are undergoing reevaluation on the basis of clinical studies. Although an indirect mechanism via stimulation or restoration of the host immune system was postulated as the primary mode of antitumor action by early workers, the results of initial clinical studies may be interpreted as strong evidence for a direct action of interferon on malignant cells. These findings demonstrate that restoration of immune function, such as reversal of inverted T4:T8 ratios in patients with Kaposi's sarcoma is not a necessary correlate for disease response.[13-14] Also local/regional or topical administration of interferon in the treatment of cervical carcinoma in situ and malignant melanoma may be more effective than systemic therapy, although this also might reflect improved responses in patients with earlier stages of disease, better access to the tumor, or simply mechanical disruption of cells.[15] Despite limited knowledge concerning how the interferons work, it remains clear that they are effective agents against certain malignancies.

Early studies of the antitumor activity of the interferons were hampered by the small quantities of interferons that could be produced. In the 1980s, this was radically altered by the introduction of recombinant DNA engineering techniques. By these techniques, a human gene coding for a single subtype of interferon is inserted into the bacterial species *E.coli*, which in turn secretes the interferon product. This permitted the production of large quantities of a highly purified, single subtype of an interferon for use in clinical trials. Of these "recombinant" preparations, subtypes of interferon alpha have been most extensively studied, although the results of investigations involving beta and gamma interferons now are becoming available. The primary areas in which the interferons appear to have a significant impact are 1): the hematologic malignancies (multiple myeloma, low-grade non-Hodgkin's lymphoma, chronic myelogenous leukemia in the chronic phase, and hairy cell leukemia), 2) malignancies that may be associated with viral infection, such as cancer of the cervix (Herpes simplex II), laryngeal papilloma, and AIDS-associated Kaposi's sarcoma, and 3) malignancies which in the past have appeared particularly sensitive to manipulations and stimulation of the immune system, such as renal cell carcinoma and malignant melanoma.[13-27]

CLINICAL EVALUATION OF INTERFERONS

Our laboratory has been a participant in several multicenter phase I/II trials utilizing recombinant alpha interferon (Schering Intron A) and natural and recombinant beta (Roswell Park Memorial Institute, Cetus) and is evaluating recombinant gamma interferon (Schering) in a phase I setting. The toxicities have been qualitatively similar among the alpha, beta, and gamma preparations and are experienced to a like degree in both natural and recombinant preparations. Toxicities appear to be dose dependent and, to some extent, schedule dependent and also may vary with route of administration. These toxicities can be divided into acute and chronic. The former include the "flu-like" syndrome of fever, rigors, myalgias, and headaches. Chronic side effects include anorexia and malaise, diarrhea, paraesthesias, and proteinuria. Local skin reactions and changes in mental status can be both acute and chronic. The acute side effects can be noted within hours of administration; tolerance to the flu syndrome develops with dosage schedules calling for administration of interferon three times per week or more frequently.

In the phase I trials with recombinant alpha interferon, partial responses were seen in non-Hodgkin's lymphoma and multiple myeloma and minor responses in chronic lymphocytic leukemia (CLL) and non-Hodgkin's lymphoma.[28] Based on these results, phase II trials were initiated in four areas: high and low grade lymphoma, multiple myeloma, and CLL. Objective responses were seen in the low grade lymphomas, with one patient having a complete response, and there were minor responses seen in patients with multiple myeloma and CLL, as well as one of eight patients with high grade lymphoma.[19] These data compare favorably with reported response rates for the low-grade lymphomas and multiple myeloma.[20,29] We also have participated in a multicenter two-arm study of intravenous versus subcutaneous alpha interferon in renal cell carcinoma. Although the overall response rate was low, dramatic responses were seen in the subcutaneous arm in patients with soft tissue metastases.[30]

INTERFERON IN HAIRY CELL LEUKEMIA

One malignancy in which the therapeutic use of the interferons has produced an exceptionally high response rate is hairy cell leukemia. This relatively rare malignancy, described by Bouroncle in 1957, is characterized clinically by often massive splenomegaly, minimal lymphadenopathy, and pancytopenias.[31] The malignant or "hairy" cell is so named because of its typical histologic appearance in which cytoplasmic projections appear like many small hairs. These cells can be found in the peripheral blood, bone marrow, liver, spleen, lymph nodes, and, occasionally, in other organs. Developmentally, the hairy cell arises from the B lymphoid series and phenotypically is more mature than the cells of chronic lymphocytic leukemia but less mature than a plasma cell.[32] Like multiple myeloma and CLL, paraproteinemia occurs in a significant number of patients, however B cell dysfunction manifested by hypogammaglobulinemia is uncommon. In addition to this B cell dysfunction, derangements in several other arms of the immune system contribute to a more complex immunodeficiency. An associated T cell dysfunction with reversal of the helper to suppressor ratio due to an increase in helper cells, depression of natural killer activity and severe monocytopenia also are frequent findings.[33-35]

Hairy cell leukemia tends to run a chronic course, with infection or hemorrhage being the usual mode of death. The treatment of choice, splenectomy, can produce clinical remissions in nearly all patients if they are appropriately selected.[36] Chemotherapy has produced mixed results. Combination chemotherapy, while occasionally effective, often results in serious morbidity due to prolonged cytopenias.[37,38] Single agent alkylating therapy has been suggested to be less toxic and at least partially effective.[39] At the same time that protocols using single agent chemotherapy with a new investigational agent, deoxycoformycin, were being initiated, clinical trials with natural and recombinant alpha interferon also were starting. Both alpha interferon and deoxycoformycin now are known to be highly efficacious in hairy cell leukemia.

Early data suggesting the exquisite responsiveness of hairy cell leukemia to treatment with interferon first appeared in trials at M.D. Anderson Hospital.[23] Seven patients received relatively low, daily doses of natural leukocyte interferon via the intramuscular route. Of these seven, four patients subsequently achieved a complete response as defined by normal peripheral blood counts and disappearance of hairy cells from the blood and bone marrow. The three other patients all had partial responses. In a follow-up to this study, a confirmed and sustained response rate of 93 percent was noted in 30 patients.[40] These included 5 patients with complete responses, 17 with partial and 6 with minor responses. These results were particularly exciting in view of the fact that 22 of the 30 had undergone splenectomy and 14 of the 30 had received previous chemotherapy.

Encouraged by these results, a multicenter phase II trial of recombinant alpha interferon in patients relapsing from or failing to respond to splenectomy was begun in 1983. Doses of two million units per square meter were given subcutaneously three times per week for at least six months after achieving maximum response. The patients have noted minimal side effects that can be controlled with acetaminophen and appropriate dose reductions. Most patients self-administer the interferon without difficulty so that this is truly an outpatient therapy with clinic visits at six-week to three-month intervals.

There is no standardized, universally accepted method of staging hairy cell leukemia or defining response to therapy. Therefore, categories of complete responses, partial responses subdivided into pathologic and hematologic, and minor responses were developed to serve as a basis of comparison between participating institutions. These definitions differ somewhat from those used in Quesada's earlier reports from M.D. Anderson.[23] A complete response was defined as having less than 5 percent hairy cells in the bone marrow biopsy (rather than an aspirate as used in the M.D. Anderson study), and peripheral blood counts including a blood hemoglobin greater than 12 gm/dl, granulocytes greater than 1,500 cells/uL, platelets greater than 100,000 cells/uL, and absence of circulating hairy cells. A pathologic partial response was defined by a decrease in the number of hairy cells in the bone marrow biopsy by at least 50 percent of the baseline value but still greater than 5 percent with normal peripheral blood counts, while a hematologic partial response consisted of a decrease in hairy cells in the bone marrow of 0 to 49 percent and a normal peripheral blood count. A minor response was defined as improvement in one or two (but not all three) of the hematologic parameters to the degree(s) listed above. This latter classification was included in the response criteria since improvement in even one parameter could translate into a significant improvement in quality of life, through decreases in transfusion requirements, or in the incidence of infection.

To date, we have entered 20 patients onto this multicenter protocol, of which 14 are evaluable for response. There were no complete responses; however, there were 8 patients with pathologic or hematologic partial responses, 3 patients experienced minor responses, 2 of 14 had stable disease, and 1 patient failed to respond. Patients were considered evaluable after a minimum of six weeks of therapy although time to maximum response was often as late as six months into the treatment period. Of 38 patients treated on this protocol at participating institutions for at least three months, 22 (58 percent) achieved a partial response and 10 patients a minor response for an overall response rate of 84 percent.[41] An immediate and sustained decrease in the number of serious infections has been noted and after the first month of therapy, when cytopenias are frequently exacerbated, transfusion requirements have decreased dramatically.

IMMUNE RESTORATION BY INTERFERON

In order to evaluate the relationship of augmentation of the host immune response to the clinical response, several parameters of immune function were assessed at baseline (pretreatment) and at three monthly intervals while on interferon. All baseline levels were done twice pretreatment and peripheral blood for all studies performed during interferon therapy was obtained approximately 24 hours after interferon administration. These immune parameters consisted of measurement of natural killer cells functionally and phenotypically and determination of total T cells and T cell subsets by phenotypic analysis. The degree and time to correction of monocytopenia also were assessed. Natural killer cells are a subset of lymphocytes that are null (non-B and non-T) but appear to be recognized phenotypically by surface antigens identified by the monoclonal antibodies Leu 7 and Leu 11. These cells appear histologically as large granular lymphocytes. Natural killer (NK) cells have been shown to be cytotoxic for malignant and transformed cells; this cytotoxicity occurs without prior sensitization to the particular target cell. Functionally, NK activity can be assessed by a number of assay systems.[42] The system used for this series employed the patient's peripheral blood mononuclear cells as the source of NK (or effector) cells and K562, a malignant erythroleukemic cell line, labeled with chromium[51] as the target cells. The target and effector cells were incubated together at varying ratios of target to effector cell concentrations. Lysis of the target cells by the NK cells was measured by the amount of chromium[51] released. In this way, the augmentation of NK activity at different time points during therapy was compared. Phenotypic determination of NK cells and T cell subsets was performed by labelling the cell surface of peripheral blood mononuclear cells with the fluorescein-conjugated monoclonal antibodies Leu 2a, Leu 3a, Leu 4, Leu 7, and Leu 11. The percentage of cells labelled with a particular monoclonal antibody was determined by flow cytometric analysis.

The baseline data for NK cell function and number revealed a near absence of functional NK cell activity as well as a moderate reduction in the percentage of circulating phenotypic NK cells. Following initiation of treatment with alpha interferon, a gradual improvement in NK function was noted in most patients requiring several months (average six months) before NK activity returned to within normal limits, although the return of NK functional activity was rapid and dramatic in a few patients. Similarly, the phenotypic return of NK cells to normal levels in the peripheral blood was protracted. These data suggest that treatment with alpha interferon resulted in a quantitative and qualitative improvement in the natural killer cell population.

These results were supported by the in vitro studies of natural killer activity in the laboratory. The NK activity of peripheral blood mononuclear cells from patients with hairy cell leukemia has been demonstrated to be severely depressed at all effector to target ratios, both pre- and postsplenectomy. In seven experiments performed, utilizing peripheral blood mononuclear cells from 3 patients, the natural killer cell activity was measured before surgery and at least six months after surgery. There was no significant improvement demonstrated in the same individuals over time despite responses clinically to splenectomy. However, when mononuclear cells from 14 patients with active disease were incubated with alpha, beta, or gamma interferon or with no interferon (controls) for 48 hours, the NK activity increased by two- to threefold over control values for specific natural killer cell activity. This augmentation still fell below the lower limits of the normal range as opposed to the full restoration of NK activity seen in the patient population treated with alpha interferon. Thus, the augmentation of NK activity in this group cannot be explained only in terms of acute effects of interferon.

In contrast to the severity of natural killer cell dysfunction, quantitative assessment of T lymphocytes by surface phenotype was not significantly altered. Although some authors report helper and suppressor subsets and total T cell populations to be significantly altered in patients with active disease and/or patients postsplenectomy, only minor numerical derangements in T cell numbers were detected in this study despite the fact that all but one had prior splenectomy and all patients had progressive disease.[34,43] Overall, the percentage of T lymphocytes was within the normal range, though the initial T cell numbers were slightly decreased in a few patients prior to therapy. These returned to within the normal range early in the treatment period. The T cell subsets and helper:suppressor ratios showed no consistent trend. The initial range of T cell subset (Leu 3a:Leu 2a) ratios varied from well within the normal range to clearly reserved ratios, however both mean and median values were normal. While individual patients experienced fluctuations in helper:suppressor ratios during the treatment course, these apparently random fluctuations bore no relationship to disease activity or response to therapy.

Monocytopenia, like natural killer cell activity, was profound prior to therapy and resolution also was protracted. There was an initial increase with the appearance of detectable monocytes in the circulation after four to six weeks of alpha interferon therapy, whereas with pretreatment only 1 of the 16 patients had any monocytes present on peripheral smear or in buffy coat preparations. Following the first month of therapy, monocyte counts increased very slowly and even six months into treatment, severe (less than 250 cell/uL) monocytopenia persisted in some patients.

The recovery of various immunologic parameters studied in this small series of patients with hairy cell leukemia appears to be a delayed phenomenon. These data suggest that interferon induced correction of immunocompetence is not a prerequisite for clinical response since the time sequence for recovery coincides with clinical improvement rather than antedates it. The data therefore suggest a direct antiproliferative, antiviral, or differentiation-induction effect of alpha interferon on the malignant population in hairy cell leukemia.

REFERENCES

A list of references is available upon request. Please send your inquiry to *NEW JERSEY MEDICINE.*

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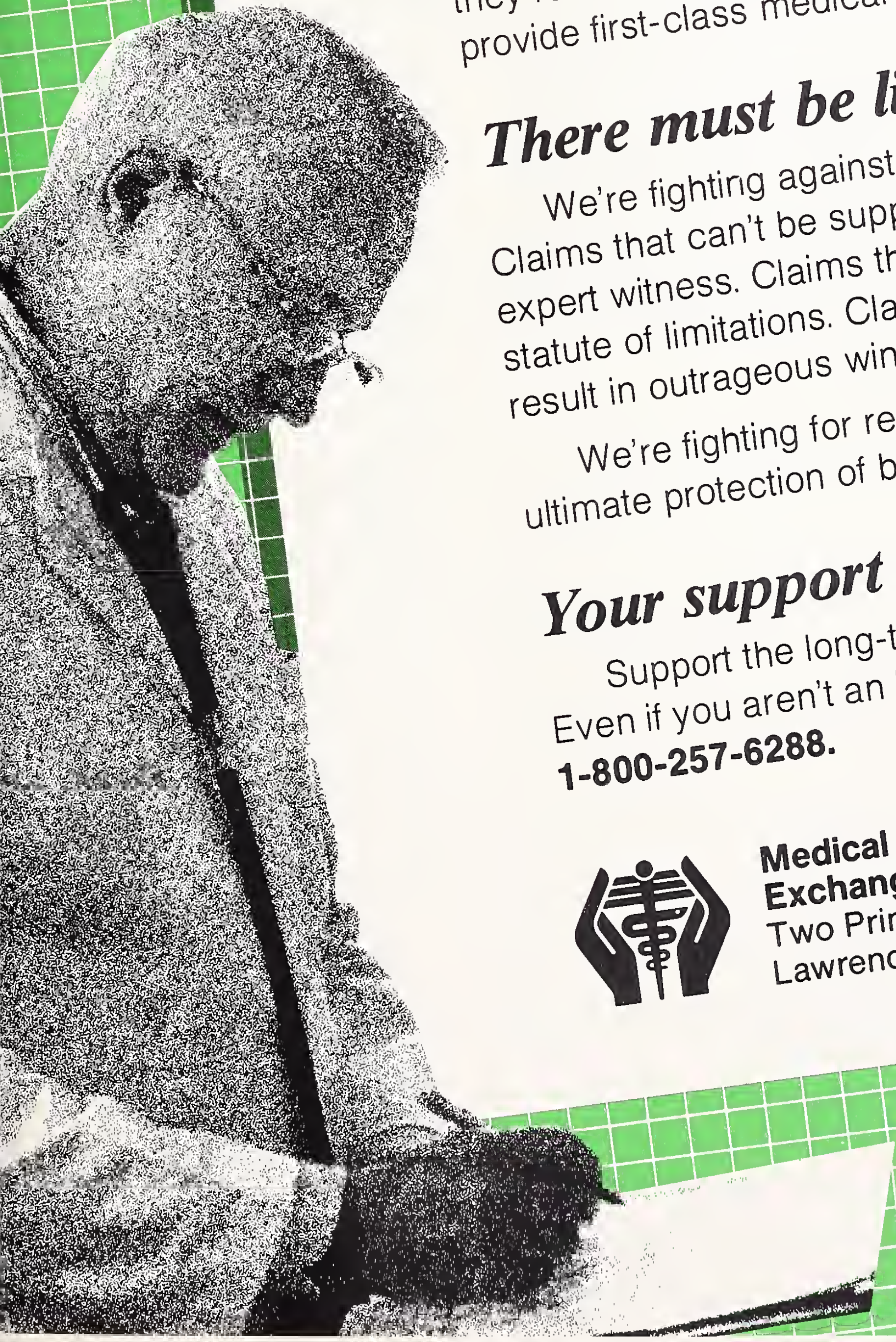

DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; AMNJ Report; New Members; Physicians Seeking Location in New Jersey

Trustees' Minutes December 21, 1986

A regular meeting of the Board of Trustees was held on Sunday, December 21, 1986, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Report of Executive Director . . .
(1) MSNJ Paid Membership . . . Noted that as of November 1986 total paid membership was 7,580 and overall membership was 9,716.
(2) MSNJ Financial Statements . . . Approved the financial statements for the period ending October 31, 1986.
(3) Legislative Update . . .
(a) Tort Reform . . . Noted that no meaningful tort reform has come out of the Senate.
(b) Medicare Assignment . . . Noted that Mr. Maressa and Dr. Kristeller presented testimony at a public hearing on the Medicaid and Medicare programs.
(c) Pharmaceutical Assistance to the Aged and Disabled . . . Noted that this bill would require physicians to accept Medicare determination of fees when a patient is on PAAD.
(d) HMO Indemnity . . . Noted that this bill was drafted by MSNJ and provides HMO beneficiaries with a free choice of provider and provides for the Medicaid fee rate to be reimbursed in capitation and closed-panel plans.
(e) Insurance Certification Requirement . . . Noted that amendments to the insurance certification regulations are being sought by the Department of Insurance.
(f) No-Fault Fee Schedule . . . Noted that MSNJ is opposed to this legislation. Also, agreed that the most important aspect of such legislation should be that the free schedule be an indemnification schedule rather than a set fee schedule.
(g) Physical Therapy Bill . . . Noted that with amendments this bill is acceptable to physicians but unacceptable to physical therapists; its future is uncertain.
(4) Pronouncement of Death and Completion of Death Certificate . . . Voted to support the State Board of Medical Examiners' proposed regulation, with modifications where necessary.
(5) Impaired Physicians Program . . . Voted to donate a gift of $1,000 to the Impaired Physicians Program to be used at the discretion of Doctor Canavan.

UMDNJ Report . . . Received from Pres. Stanley S. Bergen a written report commenting on criticism of radio announcements urging patients to use the University's hospital; UMDNJ's commitment to the poor; and a review of a clinical skills examination demonstrating the superiority of United States medical school graduates as compared to foreign medical school graduates.

NJ Hospital Association . . . Received from Pres. Louis P. Scibetta a written report commenting on the uncompensated care trust act; an independent hospital rate study with New Jersey showing the lowest hospital charges in the nation; capital reimbursement under the DRG system; and health planning concerning NJHA's opposition to S-2137.

Academy of Medicine of New Jersey . . . Noted that two members received Governor Kean's Jersey Pride Awards: Leon G. Smith, M.D., received the Clara Barton Medical Service Award and Stanley S. Bergen, Jr., M.D., received the Woodrow Wilson Award.

Committee on Drug and Alcohol Abuse . . . Approved the following two recommendations:

(1) That the Medical Society of New Jersey advise the Office of Drug Control of the New Jersey Department of Health and the Food and Drug Administration that alternate nicotine delivery systems are drugs and that each such device should be properly evaluated for its safety and efficacy for promoting the cessation of tobacco use if it is to be marketed to the public; and
(2) That the Medical Society of New Jersey oppose any attempt to offer an alternative delivery system in New Jersey which has not been approved by the Food and Drug Administration.

Committee on Utilization Review Systems . . .
(1) Classic Problems in Peer Review . . . Approved the following three recommendations:

(a) That the Executive Director review Committee files for cases which document lack of due process or negligence by reviewers; and
(b) That these cases be referred to the AMA General Counsel for appropriate legal action; and
(c) That these same cases be referred also to the State Board of Medical Examiners for their review.

(2) Responsibility/Accountability in University Hospital Teaching Programs . . . Approved as amended the following recommendations:
(a) That the Board of Trustees ask the President of UMDNJ to differentiate between the *responsibility* in decision making by Fellows/Residents in university hospital teaching programs, and the *accountability* of the physicians teaching them; (Italics indicate amendment by the Board.)
(b) That the same question be referred to New Jersey PROs and UROs; and
(c) That the same question be referred to the Association for Hospital Medical Education of New Jersey.

Young Physicians Steering Committee . . . Noted that a Young Physicians Committee has been established to meet the needs of young physicians.

MSNJ Senior Citizens Forum Planning Committee . . . Noted that a forum on senior citizens is scheduled for April 9, 1987. Also, noted comments by Ian D. Samson, M.D., President of the Ocean County Medical Society, stating that his county has formed a political action committee.

AMA Delegation . . . Noted that AMA Council on Medical Education Task Force is considering current problems in licensure and comments are being solicited on initial licensure, reregistration of licenses, and license endorsements.

Unfinished Business . . .
(1) Status of New Jersey Urologic Society . . . No decision will be made until the February or March meeting on this item.
(2) Prudential Insurance Company's Methods of Medicare Reimbursement . . . Referred to the Council on Medical Services all items of correspondence concerning Prudential Insurance Company's Medicare reimbursement.

New Business . . .
(1) New Jersey Society of Internal Medicine . . . Noted that the New Jersey Society of Internal Medicine adopted the following: "That a Medicare Oversight Committee be formed by MSNJ using the Society's Committee on Utilization Review Systems as a model." Noted that the Council on Medical Services will handle this item.

(2) North Jersey Surgical Society . . . Approved a request from the North Jersey Surgical Society to establish official liaison with the Society's Board of Trustees for the purpose of input and discussion; Dr. Bernard Gardner will serve as the liaison representative to the Board.

(3) Lena F. Edwards, M.D. . . . Authorized the preparation of a memorial resolution for presentation to the family of Lena F. Edwards, M.D.; she was awarded the Presidential Medal of Freedom, the highest honor accorded a civilian, for her selfless work with migrant workers.

(4) Invitation to Next Meeting . . . Authorized the extension of an invitation to Mr. Joseph Katz, MSNJ's lobbyist, and Dr. Harold Colburn, Chairman of the Assembly Committee on Health and Human Services, to the next Board meeting.

(5) Status of "Claims Made" Insurance Situation . . . Noted that a "protection plus policy" would be issued in February 1987 by the Medical Inter-Insurance Exchange of New Jersey.

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.
President

The past year was my 15th anniversary of service to the state of New Jersey as president of UMDNJ. Since I came to UMDNJ a year after the institution had been created by the New Jersey Legislature, personal reminiscence tends to get lost in institutional history. A "look back" becomes an evaluation of the University's overall progress. A "look ahead" over 15 more years takes us to the 21st century and into an entirely new health care system.

When I returned to my home state

1987 MSNJ MEMBERSHIP DIRECTORY

The 1987 *Membership Directory* of the Medical Society of New Jersey will be available soon. The latest issue contains all vital statistics on the membership of the Medical Society of New Jersey, as well as information on most hospitals in the Garden State.

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of New Jersey in 1971 to become president of the newly formed health sciences institution, there was no way of predicting where we would be in 1986. In the early 1970s, for instance, experts were forecasting a shortage of health manpower. The baby boomers were reaching young adulthood and large population growth was expected throughout the decade. With generous federal support, medical schools were expanding to meet the projected need for new physicians and new schools were emerging, often under state mandate and auspices.

The guiding principle of the health care system then was that every individual had a right to quality health care. At the height of the "Great Society," there were abundant resources available to support programs targeted to the needs of the poor, the elderly, and others with extraordinary medical needs. No one yet had addressed the concepts of cost containment and competition as shaping factors in health care, and the term, DRG, would not come into common usage in our language for at least five more years.

It was in this supportive and optimistic environment that New Jersey set out to create its health sciences university. What our state's leaders envisioned in the development of its health sciences university was far more than a series of educational programs for health professionals. They saw the institution evolving as a core for the state's entire health care system. Therefore, UMDNJ's growth and development to date has been aimed at fulfilling this unique mandate and purpose.

Our educational programs, for instance, have been developed within the context of an overall plan to provide the state with an adequate supply of new health care professionals without the costly overshoots evident in other fields of human endeavor. In its research programs, likewise, the University has focused its effort on developing new information relating to the state's most serious health problems.

In health care, UMDNJ also has accepted a mission that far exceeds the traditional role of a medical school in which health services are provided as a byproduct of the educational program. The University has worked to supplement the state's existing health care system both by developing new state-of-the-art specialty medical services that previously were not available within New Jersey, and by providing extensive programs of primary and preventive health services to the state's neediest populations. We serve three of New Jersey's largest urban populations: Newark, New Brunswick, and Camden.

New Jersey's leaders showed remarkable foresight in laying out such a far-reaching role for their health sciences university. And although UMDNJ has not yet achieved all of its goals, Governor Kean reaffirmed the state's direction for the university a year ago, when he challenged UMDNJ to become one of the top 25 health science centers in the nation.

The Governor's challenge was a statement of a very basic need for our state. As the health care system shrinks in response to the necessity to reduce health care costs, experts predict that there will be only 25 to 40 major academic health centers in the United States. These centers will be the only facilities equipped and staffed to offer a full range of state-of-the-art health services, and they will receive the lion's share of federal and private grant support for research, advanced clinical programs, and educational innovations. If New Jersey is to continue to thrive in the 21st century, UMDNJ must become one of these centers.

New Jersey must have a top-ranked health science university in order to maintain a strong economy. A substantial portion of our state's industry is in high technology, biomedicine, and pharmaceuticals. A major academic health center provides an anchor for such businesses, offering opportunities for sponsored research, joint ventures, and clinical trials. Nationally recognized research institutes of the type that UMDNJ is developing in areas such as cancer, liver disease, biotechnology, heart disease, geriatrics, and environmental science serve as a magnet to attract new business to the state, thus stimulating new employment and tax revenue.

New Jersey must have a top 25 health sciences institution if it is to realize its goal of revitalizing the state's cities. All of the elements required for urban redevelopment—improved educational systems, development of new housing, and stimulation of new business ventures—are dependent upon adequate health care systems within the cities to insure a healthy urban environment and a strong, productive workforce.

But most of all, New Jersey needs a world-class academic health center to assure its citizens access to the best and most advanced health care available. As medical science and biotechnology continue to advance with amazing speed, state-of-the-art medical care will require more highly sophisticated equipment and specialized personnel, at a cost that will be out of the reach of most community hospitals. Only the major university hospitals will be equipped to provide such cutting-edge care safely and economically, since they

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utilize the manpower and resources required for the educational programs. Although New Jerseyans traditionally have utilized facilities in neighboring states for such specialized care, as these resources become limited in number, state residents may have difficulty gaining access to out-of-state facilities. New Jersey must be prepared to provide sophisticated health services for its citizens, services that we have proved many times can be supplied at roughly half the price of New York and Philadelphia facilities.

UMDNJ does not have the luxury of time. In the current environment, with waning support for medical education and biomedical research from the federal government and the health care industry alike, if New Jersey does not develop a top-ranked health sciences university in the next 10 to 15 years, the state will fail in this quest. And the support that is needed to accelerate the process must come from the state itself, in a number of ways. Mechanisms must be developed to provide financial support for health care for the poor and medical education to help relieve the extraordinary financial burdens on our University hospitals and stabilize their revenue base. In addition, New Jersey must recognize the special status and role of our University hospitals and exempt them from the regular and usual certificate of need process, so that they no longer are forced to compete with private facilities in order to develop new programs or purchase new equipment, granting our four core hospitals the right of first refusal on new health care services and health care technologies.

Finally, the state must provide UMDNJ with the financial resources it needs to grow and to develop its programs to their full potential. We, at the University, know where UMDNJ should be at the start of the new century. We have laid out a detailed plan to become a "top 25" institution, targeting new initiatives and expanded efforts which must be achieved. With the continued support of our state and its leaders and with the continued dedication of our faculties and staff, the University can provide the means for New Jersey to enter the 21st century as a leader in biotechnology and biomedical science and as a model of progressive health care delivery.

AMNJ Report

Arthur Krosnick, M.D.
President

The Academy held its first major symposium of 1987 on Thursday, February 12, on "AIDS: A Current Look Six Years After the First Reported Cases in the United States." The meeting which was chaired by Dr. Edward Johnson of St. Michael's Medical Center primarily was directed at physicians but was of interest to research scientists involved in the diagnosis and therapeutic aspects of the syndrome.

The Academy is pleased to announce that Ronnie Davidson of Princeton joined our staff. Ms. Davidson is serving as Associate Director for Continuing Medical Education and is responsible for assisting in the coordination of our CME activities as well as developing and implementing new and innovative income-producing programs. She was formerly employed by New York University as Assistant Director in their School of Continuing Education. Ms. Davidson holds M.A. and Ed.D. degrees from Columbia University Teachers College.

The Academy is assisting in the formation of a New Jersey Physicians' Golf Association which will be patterned after the long established New York City club. The group will hold six tournaments per year and the first event will be held at the Essex Fells Country Club on Thursday, May 21, 1987. Dr. Leon Smith will be the first chairman and Dr. Peter Tsairis will be the first secretary. Membership is open to Academy Fellows and further information can be obtained by contacting Cal Heitzmann at the Executive Offices.

The Governor's Jersey Pride Awards Program culminated on January 8, 1987, with the presentation of 11 awards.

The topic for our "First Wednesday" program for February was "What's Ahead for Physician Reimbursement in the New Congress." Our guest speaker was Ms. Adrienne Lang, Director, Office of Government Affairs, American Society of Anesthesiologists in Washington, D.C. Ms. Lang highlighted specific legislative plans impacting on physician reimbursement and what action can be taken by the physician community.

New Members

Burlington County

Charles A. Dackis, M.D., Rancocas
Albert N. Ferrari, Jr., M.D., Mount Holly
Richard F. Gargiulo, M.D., Lumberton
Eileen G. Hill, M.D., Mount Laurel
Roberta M. Lynch, M.D., Cherry Hill
Steven A. Scuderi, M.D., Medford

Camden County

Gary M. Brownstein, M.D., Cherry Hill
Joseph P. Costabile, M.D., Collingswood
Bernard J. Cortese, M.D., Marlton
Stephen P. Gadomski, M.D., Haddonfield
Bruce D. Gooberman, M.D., Merchantville
Thomas A. Grabiak, M.D., Haddonfield
Carolyn J. Horowitz, M.D., Cherry Hill
Katherine Y. Look, M.D., Haddonfield
Faith E. Nathan, M.D., Maple Shade
Irene P. Raisis, M.D., Voorhees
John S. Santaspirt, D.O., Cherry Hill

Essex County

Samuel M. Dower, M.D., Livingston
Steven A. Eisenstat, M.D., Maplewood
Raymond P. Kenny, M.D., Montclair
Wu-Fei Liao, M.D., Newark
Orazio L. Giliberti, M.D., Edison
Frank E. Robinson, M.D., Paterson
Marvin I. Ruderman, M.D., West Caldwell
John V. Scalera, M.D., Bloomfield
Alvin M. Schmidt, M.D., West Orange
Suresh R. Thani, M.D., Irvington
Paul J. Vallone, M.D., Morristown
Rosalinda A. Yutangco, M.D., West Orange
Andrew I. Zablow, M.D., Livingston
Leonard J. Zawodniak, M.D., West Orange

Gloucester County

Victor Sobolewski, III, D.O.

Hudson County

Riad A. Kabakibi, M.D., Union City
Hyungkoo Yun, M.D., Jersey City

Mercer County

John D. Bleiweiss, M.D., Trenton
David W. Kent, M.D., Lawrenceville

Middlesex County

Michael J. Baum, D.O., Edison
Brad J. Cohen, M.D., Bayonne

Leonard J. Emma, M.D., Edison
Stuart M. Homer, M.D., Woodbridge
Gary S. Kauffman, M.D., Monmouth Junction
Thomas Kinaszczuk, Jr., M.D., North Brunswick
Daniel M. Lebovic, M.D., Edison
Thomas F. Seck, M.D., New Brunswick
Steven Streit, M.D., East Brunswick
Alexander Wajnberg, M.D., Edison

Monmouth County

Stephen J. Shroyer, M.D., Belmar

Morris County

Brian D. Beyerl, M.D., Chatham
Cary M. Silverman, M.D., Parsippany
Anna Sokolova, M.D., Morristown

Passaic County

Kathleen M. Bonsick, M.D., Wayne
John A. Cece, M.D., Clifton
Dennis P. Fielding, M.D., Belleville
Ligaya L. Prystowsky, M.D., Passaic
Paul J. Salato, M.D., Paterson
Samundar K. Singh, M.D., Paterson

Somerset County

Nora Brayshaw, M.D., Watchung
Robert J. Bross, M.D., Somerset
Eugene P. Fazzini, M.D., Somerville
William L. Hom, M.D., Belle Mead

Union County

Nagy S. Bernaba, M.D., Elizabeth
Daniel J. Preston, M.D., Springfield

Warren County

Melaid B. Isaac, D.O., Phillipsburg

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ALLERGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, clinical immunology. Solo or partnership. Available July 1987.

ANESTHESIOLOGY—Lee A. Balaklaw, M.D., 575 Easton Ave., Apt. 6M, Somerset, NJ 08873. Far Eastern University (Philippines) 1980. Board eligible. Group or partnership. Available July 1987.

Alan Miller, M.D., 260 First St., Apt. C13, Mineola, NY 11501. Eastern Virginia 1982. Board eligible. Group or partnership. Available July 1987.

DERMATOLOGY—Norman R. Friedman, M.D., 1736 Humphrey, Birmingham, MI 48008. SUNY-Upstate 1983. Board eligible. Partnership, solo, group. Available July 1987.

ENDOCRINOLOGY—John Hodge, M.D., Naval Hospital, Endocrine Branch, P.O. 566, San Diego, CA 02134. UMDNJ 1979. Board eligible. Board certified (IM). Group with academic association. Available May 1987.

Issac Sachmechi, M.D., 61-55 98th St., #16B, Rego Park, NY 11374. Technion 1980. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

FAMILY MEDICINE—Raymond L. Ebarb, M.D., 61-14th Ave., West Babylon, NY 11704. Guadalajara 1982. Board eligible. Group or partnership. Available July 1987.

Roberto J. Irving, M.D., St. Mary Hospital, 308 Willow Ave., Hoboken, NJ 07030. Guadalajara 1985. Board eligible. Group or partnership. Available July 1987.

IMMUNOLOGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, allergy. Solo or partnership. Available July 1987.

INTERNAL MEDICINE—Jae Hong, M.D., 90-17 52nd Ave., Elmhurst, NY 11373. Seoul National (Korea) 1982. Board eligible. Partnership or group. Available July 1987.

Thomas E. Jackson, M.D., 251-A Leveland Ln., Modesto, CA 95350. Guadalajara 1981. Board eligible. Group, partnership, solo. Available.

Joseph Minieri, M.D., 2200 Osborne 2nd River Rd., Point Pleasant, NJ 08742. Buenos Aires 1958. Board eligible. Solo. Available.

Harvey Mossman, M.D., 120 Marcellus Rd., #2U, Mineola, NY 11501. Med. Coll. of Pa. Board eligible. Group, partnership, solo. Available July 1987.

Issac Sachmechi, M.D., 61-55 98th St., #16B, Rego Park, NY 11374. Technion 1980. Also, endocrinology. Board certified. Board eligible (ENDOCRIN).

221st MSNJ ANNUAL MEETING
Americana Host Farm Resort
Lancaster, Pennsylvania

Wednesday, April 29, 1987

3:30 P.M.—Board of Trustees' Meeting

Thursday, April 30, 1987

9:00 A.M.—Registration Opens
9:00 A.M.—Message Center Opens
2:00 P.M.—House of Delegates
4:00 P.M.—Reference Committees

Friday, May 1, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
9:00 A.M.—House of Delegates (election)
12:00 NOON—Golden Merit Award Ceremony followed by Reception
2:30 P.M.—Reference Committees
5:00 P.M.—JEMPAC Political Forum
5:45 P.M.—JEMPAC Wine and Cheese Reception

Saturday, May 2, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
8:30 A.M.—House of Delegates
1:30 P.M.—House of Delegates
6:30 P.M.—Inaugural Reception followed by Inaugural Dinner

Sunday, May 3, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center Opens
8:30 A.M.—Program on one topic of major interest to the physician
1:00 P.M.—Board of Trustees' Meeting

Group or partnership. Available July 1987.

Michael F. Scharle, M.D., 1754 E. 2nd St., Long Beach, CA 90802. Guadalajara 1979. Also, pediatrics. Board eligible. Solo or partnership. Available.

John A. Stankoski, M.D., 10 Overlook Rd., Apt. 4H, Summit, NJ 07901. Bologna (Italy) 1984. Partnership, solo, group. Available July 1987.

OBSTETRICS/GYNECOLOGY—Rigoberto Cerda, M.D., 110 Font Martero St., Humacao, Puerto Rico 00661. Santo Domingo 1963. Board eligible.

Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. University of Texas 1983. Board eligible. Group or partnership. Available July 1987.

Michael Molina, M.D., 4 Howard Ct., Staten Island, NY 10310. Guadalajara 1981. Board eligible. Partnership. Available July 1987.

Michael A. Schiavone, M.D., 447 Linwood Ave., Buffalo, NY 14209. Pittsburgh 1982. Group, partnership, solo. Available July 1987.

Lee Anthony Tripp, M.D., 541 Brinton St., Philadelphia, PA 19144. Temple 1981. Board eligible. Solo or partnership. Available.

PEDIATRICS—A-salam Al-Hafidh, M.D., 2609 Featherstone Rd., #239, Oklahoma City, OK 73120. Baghdad Medical College 1976. Also, pediatric gastroenterology. Board eligible. Group, partnership, solo. Available July 1987.

PSYCHIATRY—Arthur Dworetz, M.D., 2355 Tilbury Ave., Pittsburgh, PA 15217. North Carolina 1983. Board eligible 1987. Group, partnership, solo. Available July 1987.

PULMONARY—Allen J. Salm, M.D., 3270 Warrensville Ctr. Rd., Apt. 210, Shaker Heights, OH 44122. Case Western Reserve (1985). Board eligible. Group, partnership, solo. Available July 1987.

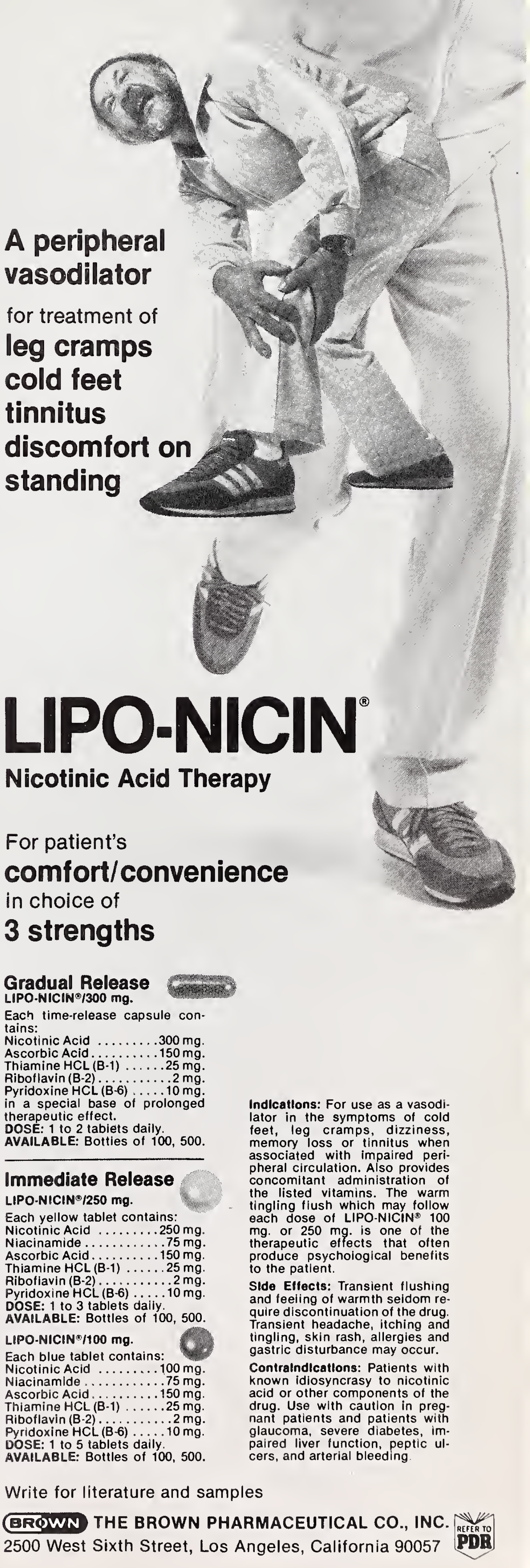
RHEUMATOLOGY—Robert Lesser, M.D., 7560 Woodcrest Ave., Philadelphia, PA 19151. Chicago Medical 1982. Board eligible. Board certified (IM). Group, partnership, hospital based. Available July 1987.

SURGERY—Peter H. Block, M.D., 1332 Weathervane Ln., Apt. 2A, Akron, OH 44313. New York Medical College 1982. Board eligible. Group or partnership. Available July 1987.

Patrick P. Montefusco, M.D., 4 Montfort Dr., Huntington, NY 11743. Georgetown 1977. Board certified. Partnership. Available.

Dorian J. Wilson, M.D., 28 Diana Dr., South Plainfield, NJ 07080. UMDNJ 1982. Board eligible. Hospital staff, medical school affiliate. Available July 1987.

UROLOGY—Steven E. Marks, M.D., 9207 Groundhog Dr., Richmond, VA 23235. Bowman Gray 1982. Board eligible. Group or partnership. Available.



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Thiamine HCL (B-1) ......25 mg.
Riboflavin (B-2)...........2 mg.
Pyridoxine HCL (B-6) .....10 mg.
DOSE: 1 to 3 tablets daily.
AVAILABLE: Bottles of 100, 500.

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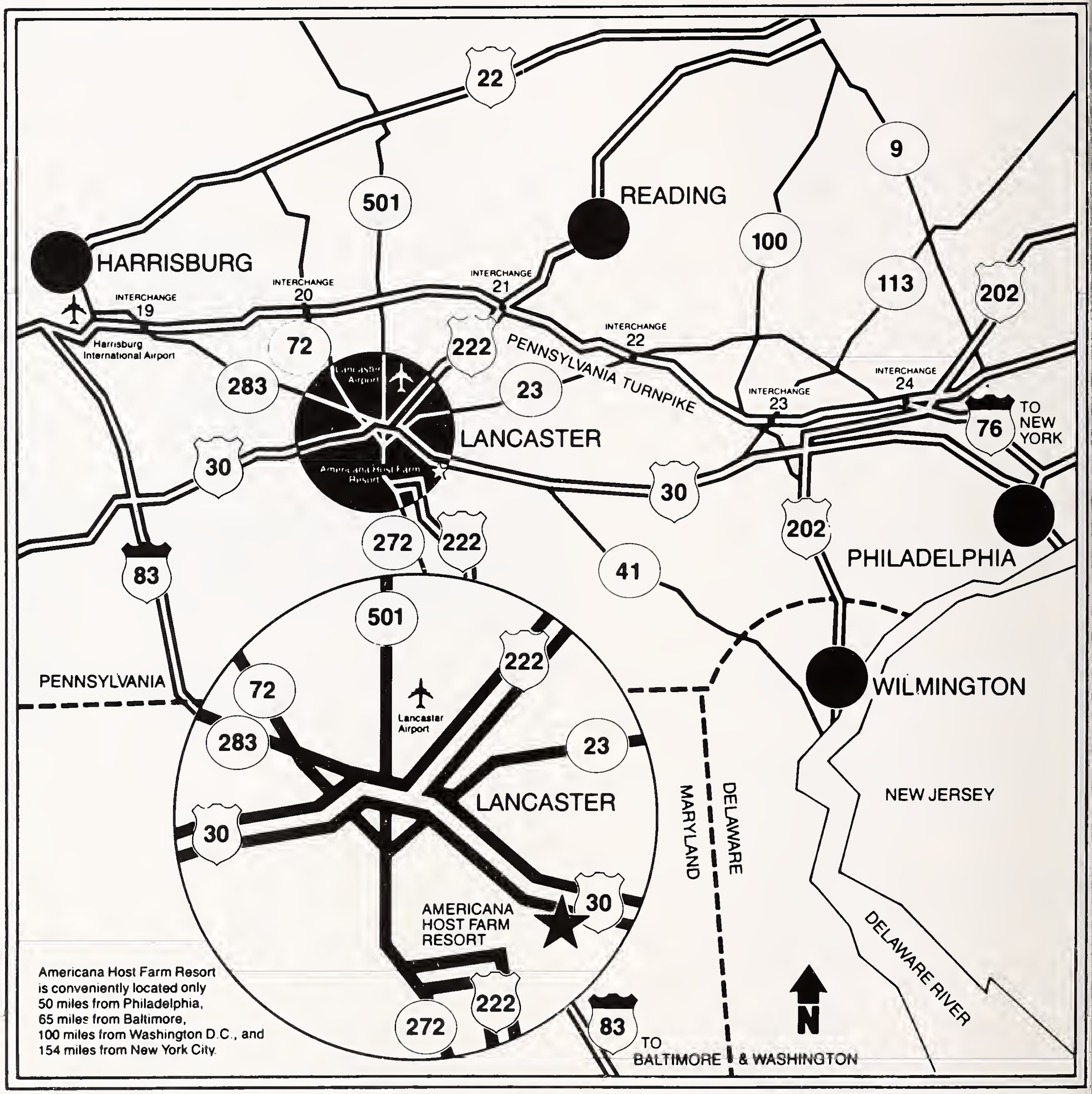

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FROM PITTSBURGH & POINTS WEST

Travel East on Pa. Turnpike to Int. 19. Go South on I-283 for 30 miles into Route 30 East for 6 miles to Americana Host Farm Resort.

FROM PHILADELPHIA

Take Pa. Turnpike West to Interchange No. 21. Travel South on U.S. Rte. 222 to U.S. Route 30. Travel East on U.S. Route 30, approximately 5 miles to Americana Host Farm Resort.

FROM BALTIMORE & WASHINGTON

Go North on Interstate Route 83 to York, Pa. Turn East on U.S. Route 30 for 32 miles to Americana Host Farm Resort.

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Americana Host Farm Resort

HOUSING APPLICATION
221st ANNUAL MEETING
THE MEDICAL SOCIETY OF NEW JERSEY

THURSDAY, APRIL 30, TO SUNDAY, MAY 3, 1987

E FOLLOWING ARE ALL-INCLUSIVE PACKAGE PLANS BASED ON)DIFIED AMERICAN PLAN, INCLUDING DINNER AND BREAKFAST .ILY STARTING WITH DINNER ON THE DAY OF ARRIVAL, THE SAT-DAY NIGHT BANQUET, LIVE CABARET SHOWS EACH EVENING ATURING A DIFFERENT SHOW EVERY NIGHT, STATE SALES TAX, D ALL GRATUITIES COVERING BELLMEN FOR IN/OUT LUGGAGE RVICE, CHAMBERMAIDS, AND ALL MEAL SERVICE AS OUTLINED:

UR-NIGHT PACKAGE
41.00 PER PERSON, SINGLE OCCUPANCY
26.85 PER PERSON, DOUBLE OCCUPANCY
44.00 PER CHILD SHARING A ROOM WITH PARENTS

IREE-NIGHT PACKAGE
45.00 PER PERSON, SINGLE OCCUPANCY
55.00 PER PERSON, DOUBLE OCCUPANCY
08.00 PER CHILD SHARING A ROOM WITH PARENTS

/O-NIGHT PACKAGE
49.00 PER PERSON, SINGLE OCCUPANCY
83.65 PER PERSON, DOUBLE OCCUPANCY
72.00 PER CHILD SHARING A ROOM WITH PARENTS

- Forms received after April 1, 1987, will be confirmed on an "if available" basis.
- Fill out only one form for each room required.
- DEPOSIT OF $100 PER ROOM MUST ACCOMPANY FORM TO CONFIRM RESERVATIONS.
- Please make check payable to HOST FARM. Major credit cards accepted at hotel, but not for deposit.
- Hotel confirmation is required for check-in.
- Send form and deposit to:

  Host Reservations
  2300 Lincoln Highway East
  Lancaster, PA 17602
  717-299-5500

IECK TYPE OF ROOM REQUIRED: ☐ SINGLE OCCUPANCY ☐ DOUBLE OCCUPANCY

.EASE NOTE: Number of persons attending the Inaugural Dinner-Dance honoring President-Elect and Mrs. Harry M. Carnes on Saturday, May 2, 1987 ____________

EASE PRINT OR TYPE THE FOLLOWING INFORMATION:

\ME: ____________ NO. of CHILDREN: ____________

IARING ROOM WITH: ____________ CHILDREN'S AGES: ____________

____

)DRESS: ____________

TY: ____________ STATE: ____________ ZIP: ____________

JSINESS PHONE NO. ____________ HOME PHONE NO. ____________

IECK IF OFFICIAL DELEGATE ☐ COUNTY: ____________

RRIVAL DATE ____________ DAY ____________

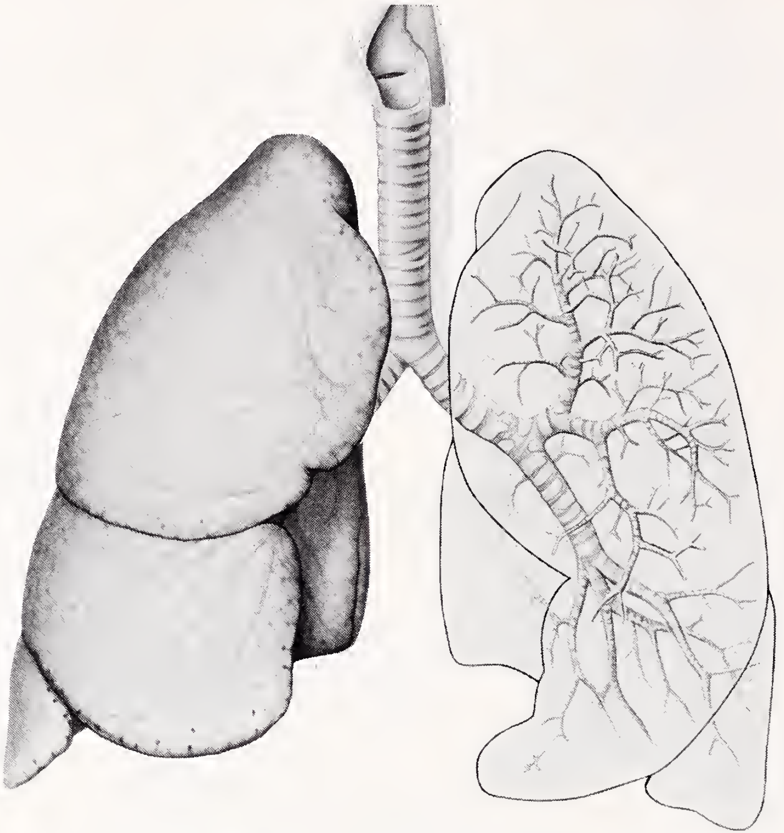
EPARTURE DATE ____________ DAY ____________

CHECK-IN: AFTER 4 PM
CHECK-OUT: BY 12 NOON

MEDICAL SOCIETY OF NEW JERSEY—221st ANNUAL MEETING

#13242

Consider the causative organisms…



Ceclor® cefaclor

250-mg Pulvules® t.i.d.

offers effectiveness against the major causes of bacterial bronchitis

H. influenzae, *H. influenzae*, *S. pneumoniae*, *S. pyogenes*
(ampicillin-susceptible) (ampicillin-resistant)

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae)*, *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* – If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy – Pregnancy Category B – Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor® (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers – Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children – Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain – Transitory abnormalities clinical laboratory test results have been reported. Although th were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic – Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic – Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal – Slight elevations in BUN or serum creatinine (less th 1 in 500) or abnormal urinalysis (less than 1 in 200).

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Note: Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylax of rheumatic fever. See prescribing information.

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Lilly

Additional information available to the profession on request from
Eli Lilly and Company,
Indianapolis, Indiana 46285

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

400441

CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

This list is compiled through the cooperation of the Committee on Medical Education of the Medical Society of New Jersey, The Academy of Medicine of New Jersey, the New Jersey Chapter of the American Academy of Family Physicians, and the Office of Continuing Medical Education of the UMDNJ. For information on accreditation, please contact the sponsoring organization(s), indicated by italics—last line of each item.

ANESTHESIOLOGY

March

2 **Lecture Series**
9 7:45 A.M.—Newark Beth Israel
16 Center, Newark
23 *(UMDNJ and Newark Beth Israel Hospital Medical Center)*

4 **Anesthesiology Grand Rounds**
11 4:00—NJ Medical School,
18 100 Bergen Street, Newark
25 *(UMDNJ)*

11 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson
Medical School, Rm. 593,
New Brunswick
(UMDNJ)

April

1 **Anesthesiology Grand Rounds**
8 4:00—NJ Medical School,
15 100 Bergen Street, Newark
22 (UMDNJ)
29

6 **Lecture Series**
13 7:45 A.M.—Newark Beth Israel
20 Medical Center
27 *(UMDNJ and Newark Beth Israel Medical Center)*

8 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson
Medical School, New Brunswick
(UMDNJ)

CARDIOLOGY

March

10 **Pathophysiology and Treatment of Acute Congestive Heart Failure**
9-10 A.M.—Holy Name Hospital,
Teaneck
(Holy Name Hospital and AMNJ)

13 **The LRC Coronary Prevention Trial and Its Implications**

20 **Anticoagulants in Heart Disease**
8:30 A.M.—United Hospitals Medical
Center, Annex. Aud., Rms. B and C,
Newark
(United Hospitals Medical Center and AMNJ)

14 **Cardiac Rehabilitation**
8-9 A.M.—Newcomb Medical Center,
Vineland
(AMNJ)

26 **Silent Myocardial Ischemia**
11 A.M.-12 noon—St. Joseph's
Hospital and Medical Center,
Paterson
(St. Joseph's Hospital and Medical Center)

April

10 **Cardiac Arrhythmias in Children**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

MEDICINE

March

2 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson
Medical School, Academic Health
Center, Rm. 393, New Brunswick
(UMDNJ)

2 **University Hospital Tumor**
9 **Conference**
16 8:00 A.M.—University Hospital,
23 Newark
30 *(UMDNJ)*

3 **Chemicals and Health**
8:30 A.M.—Palisades General
Hospital, North Bergen
(AMNJ)

3 **Pulmonary Conference**
10 8-9 A.M.—University Hospital,
17 Rm. H-349, Newark
24 *(UMDNJ)*
31

4 **Medical Grand Rounds**
11:30 A.M.-1 P.M.—VA Medical Center,
East Orange
(Endocrine Section, AMNJ)

4 **Dinner Meeting**
6-9:30 P.M.—Holiday Inn,
Newark Airport
(Endocrine Section, AMNJ)

4 **8th Annual Statewide Tumor Board Conference Dinner**
6 P.M.—MSNJ Executive Offices,
Lawrenceville
(Oncology Society of NJ and AMNJ)

4 **Continuing Education Series**
18 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant Valley
Way, West Orange
(UMDNJ and Kessler Institute for Rehabilitation)

4 **Dermatology I**
11 **Dermatology II**
18 **Dermatology III**
25 **Allergy/Immunology I**
8:30-10:30 A.M.—Alexian Brothers
Hospital, Grassman Hall, Elizabeth
(Alexian Brothers Hospital and AMNJ)

4 **Medical Lecture Series**
11 10:30 A.M.-12 noon—Christ
18 Hospital, Jersey City
25 *(Christ Hospital and AMNJ)*

4 **Biliary Tract, Which Test Is Best?**
11 **To Be Announced**
18 **Diuretics: Sailing Between Scylla and Charybdis**
25 **Lipids, Silent Ischemia, and the Hot Reactors**
12 noon-1 P.M.—Robert Wood
Johnson Medical School,
Med. Educ. Bldg., Rm. 102,
New Brunswick
(UMDNJ)

4 **Deinstitutionalization/Management Issues of Chronic Patients**
8:30-10 A.M.—Elizabeth General
Medical Center
(Elizabeth General Medical Center)

4 **Endocrine Conferences**
11 3:30-5 P.M.—Rotates between
18 Newark Beth Israel Medical Center,
25 United Hospital, University
Hospital, Newark, and VA Medical
Center, East Orange
(Endocrine Section, AMNJ)

5 **Recent Advances in Vitamin Metabolism**
9 A.M.—United Hospitals Medical
Center, Annex Aud., Rms. B and C,
Newark
(United Hospitals Medical Center and AMNJ)

5 **Blood Bank Conferences**
12 4:00 P.M.—University Hospital,
19 Rm. C-128, Newark
26 *(UMDNJ)*

6 **Current Prescription of Asthma**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

6 **Department of Medicine Grand**
20 **Rounds**
9-10 A.M.—Crean Hall, St. Francis
Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

6 **Diabetes**
13 **Silent Coronary**
20 **Minimum Inhibitory Concentrations and Antibiotic Sensitivity**
27 **Update on Oncology**
12 noon—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

6 **Current Prescription of Asthma**
17 **Ventilatory Failure**
12 noon—St. Mary's Hospital,
Orange
(St. Mary's Hospital and AMNJ)

6 **Pain Management Center**
13 8 A.M.—NJ Medical School, 100
20 Bergen St., Newark
27 *(UMDNJ)*

6 **Urology Basic Science Conference**
13 3-4 P.M.—New Jersey Medical School,
20 Rm. C-600, Newark
27 *(UMDNJ)*

6 **Grand Rounds—Rehabilitation Medicine**

THE PHILADELPHIA HEART INSTITUTE

of Presbyterian-University of Pennsylvania Medical Center

CARDIOLOGY UPDATE . . .

is designed for the Physician and provides an intensive survey of the current status of Clinical Cardiology . . .

WEDNESDAY

MARCH 4, 1987
3:00 to 5:30 PM

DIAGNOSIS AND MANAGEMENT OF AORTIC AND PERIPHERAL VASCULAR DISEASE

MODERATOR: RICHARD HELFANT, M.D.

Aortic Dissection: Clinical, Noninvasive Imaging and Angiographic Findings	*David Ogilby, M.D*
Aortic Aneurysm: Clinical, Noninvasive Imaging and Angiographic Findings	*Gary Vigilante, M.D.*
Case Presentations	*Jonathan Gomberg, M.D.*
Indications and Results of Surgery for Aortic Dissection	*Grant Parr, M.D.*
Long Term Results of Angioplasty for Peripheral Vascular Disease	*David Friedman, M.D.*
Questions and Answers	*The Audience*

- No Registration Fee
- No Advance Registration Required
- CME Credits*

* * *Wine and Cheese Served Following Each Session* * *

Scheie Eye Institute Auditorium
Presbyterian-University of Pennsylvania
Medical Center
39th and Market Streets
Philadelphia, Pennsylvania

Parking Available (at discount rate.)

*The University of Pennsylvania School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing education for physicians. The University of Pennsylvania School of Medicine designates this continuing medical activity for 22.5 credit hours of Category I of the Physicians Recognition Award of the AMA (2.5 credit hours each lecture).

1:30-2:30 P.M.—New Jersey Medical
School, Newark
(UMDNJ)

6 **Urology Grand Rounds**
13 4-6 P.M.—New Jersey Medical School,
20 Newark
27 *(UMDNJ)*

7 **Mortality and Morbidity**
14 **Conference**
21 8:30-9:30 A.M.—NJ Medical School
28 MSB, New Brunswick
(UMDNJ)

10 **University Echo Club**
7:30 P.M.—University Hospital,
Rm. H-349, Newark
(UMDNJ)

10 **Dermatology**
8-10 P.M.—Schering Corporation,
Kenilworth
*(New Jersey Dermatological
Society and AMNJ)*

10 **Can Cancer Be Prevented?**
12 noon—West Jersey Hospital,
Camden Division
(AMNJ)

10 **Hyperalimentation**
12 noon-1 P.M.—The Hospital Center
at Orange
(AMNJ)

10 **Renal Biopsy Conferences**
12:30-2 P.M.—Barnert Memorial
Hospital Center, Paterson
*(Barnert Memorial Hospital and
AMNJ)*

10 **Dermatology Program**
8-10 P.M.—Schering Corp.,
Kenilworth
*(NJ Dermatological Society and
AMNJ)*

11 **Adrenal Diseases**
10:30-11:30 A.M.—St. Mary's
Hospital, Passaic
(AMNJ)

11 **Alzheimer's Disease**
12 noon—1 P.M.—St. James
Hospital, Newark
*(AMNJ and NJ State Departments
of Health and Community Affairs)*

11 **Office Management of Common
Medical Issues**
12-4 P.M.—Kennedy Memorial
Hospital, Stratford
(UMDNJ)

11 **Pharyngitis:
Approaches—1986-1987**
1:30-2:30 P.M.—Essex County
Hospital Center, Cedar Grove
(AMNJ)

11 **To Be Announced**
2-5 P.M.—St. Barnabas Medical
Center, Livingston
*(NJ Society for Gastrointestinal
Endoscopy and AMNJ)*

12 **Adrenal Diseases**
11 A.M.—St. Joseph's Hospital and
Medical Center, Paterson
(AMNJ)

13 **Alzheimer's Disease**
12 noon-1 P.M.—Freehold Area
Hospital
*(NJ Departments of Health and
Community Affairs and AMNJ)*

13 **Current Clinical Concepts in
Rheumatology/Immunology**
12:15-1:15—Kennedy Memorial
Hospital, Conference Room,
Stratford
(UMDNJ)

17 **Newer Approaches to
Hyponatremia**
4-5 P.M.—Robert Wood Johnson
Medical School, Rm. 383,
New Brunswick
(UMDNJ)

17 **Nephrotoxicity of Common Drugs**
8:30 A.M.—Palisades General
Hospital, North Bergen
(AMNJ)

17 **IVP Conference**
4-6 P.M.—New Jersey Medical School,
Newark
(UMDNJ)

18 **AIDS**
8-9 A.M.—Somerset Medical Center,
Somerville
*(New Jersey Department of Health
and AMNJ)*

18 **Interhospital Rheumatology
Rounds**
4:30-6 P.M.—University Hospital,
Rm. I-355, Newark
(UMDNJ)

18 **Distress of Larynx and Vocal
Rehabilitation**
7-8 P.M.—West Hudson Hospital,
Kearny
(West Hudson Hospital and AMNJ)

18 **Anaerobic Infections**
9 A.M.—Warren Hospital,
Phillipsburg
(AMNJ)

18 **Renal Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson
Medical School, Rm. 108B,
New Brunswick
(UMDNJ)

18 **Dermatology Conferences**
6-9 P.M.—Rutgers Community
Health Plan, U.S. Hwy. 1,
New Brunswick
*(Rutgers Community Health Plan
and AMNJ)*

19 **Antibiotics: Proper Use of**
2 P.M.—John E. Runnells Hospital,
Berkeley Heights
(AMNJ)

19 **New Update in Treating Infections
in the Geriatric Patient**
5-6:30 P.M.—Somerset Medical
Center, Somerville
*(Somerset Medical Center and
AMNJ)*

20 **Indications for Invasive Studies**
9 A.M.—St. Francis Medical Center,
Trenton
*(St. Francis Medical Center and
AMNJ)*

27 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical
Center, Annex. Aud., Rms. B and C,
Newark
*(United Hospitals Medical Center
and AMNJ)*

April

1 **Annual Otto Brandman, M.D.,
Award Ceremony**
6:30 P.M.—Hyatt Regency Hotel,
New Brunswick
*(American Diabetes Assoc., NJ
Affiliate, Inc. and AMNJ)*

1 **AIDS**
4:15-5:15 P.M.—Kessler Institute for
Rehabilitation, West Orange
*(NJ Department of Health and
AMNJ)*

1 **Continuing Education Series**
15 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant Valley
Way, West Orange
*(UMDNJ and Kessler Institute for
Rehabilitation)*

1 **Treatment of Anxiety and
Depression in the Elderly**
8:30-10 A.M.—Elizabeth General
Medical Center
*(Elizabeth General Medical
Center)*

1 **Allergy Immunology II**
8 **Allergy Immunology III**
15 **Pituitary Adrenals and
Reproductive Endocrinology**
22 **Thyroid, Calcium Metabolism, and
Metabolic Bone Disease**
29 **Diabetes Mellitus, Lipid
Metabolism, and Ectopic
Hormones**
8:30-10 A.M.—Alexian Brothers
Hospital, Grassman Hall, Elizabeth
*(Alexian Brothers Hospital and
AMNJ)*

1 **Medical Lecture Series**
8 10:30 A.M.-12 noon—Christ
15 Hospital, Jersey City
22 *(Christ Hospital and AMNJ)*
29

1 **Treatment of Hypertension in the
Elderly**
8 **Grand Rounds**
15 **New Concepts in the Management
of Coronary Artery Disease**
22 **Grand Rounds**
29 **Grand Rounds**
12 noon-1 P.M.—Robert Wood
Johnson Medical School, Rm. 102,
Medical Educ. Bldg.,
New Brunswick
(UMDNJ)

1 **Endocrine Conferences**
8 3:30-5 P.M.—Rotates between
15 Newark Beth Israel Medical Center,
22 United Hospitals, University
29 Hospital, Newark, and VA Medical
Center, East Orange
(Endocrine Section, AMNJ)

2 **Management of Abdominal
Emergencies**
11 A.M.—St. Joseph's Hospital and
Medical Center, Paterson
*(St. Joseph's Hospital and Medical
Center and AMNJ)*

2 **AIDS**
11:45-12:45 P.M.—John F. Kennedy
Medical Center, Edison
*(NJ Department of Health and
AMNJ)*

2 **Allergy, Immunology, and**
9 **Infectious Diseases**
16 11:00 A.M.—Children's Hospital,
23 Newark
30 *(UMDNJ)*

2 **Blood Bank Conferences**
9 4:00 P.M.—University Hospital,
11 Room C-128, Newark
23 *(UMDNJ)*
30

2 **Molecular Medicine**

June 8-12, 1987

Update Your Medicine 1987.

Association of Practicing Physicians of The New York Hospital and Cornell University Medical College. 34½ hours Category I credit, (40½ if optional workshops taken). A one week review of all subspecialties of internal medicine. 8 major review lectures, 12 workshops, 2 Meet the Professor luncheons, optional practice workshops in breast/pelvic and male genitorectal examinations. Held at The New York Hospital-Cornell, 1300 York Avenue at 69th Street, New York. Information: Office of CME, 212-472-6119. Dr. Lila A. Wallis is Course Director. Also call us for information about Update Your Medicine Ithaca course July 13-17, 1987.

CME
See Pages 139
to 147

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THE LIKOFF CARDIOVASCULAR INSTITUTE
and
THE DIVISION OF CARDIOLOGY
HAHNEMANN UNIVERSITY
PRESENT

CARDIOLOGY TODAY

March 25, 1987

"The Management of Patients Undergoing Cardiac Surgery"

MODERATOR: CHARLES BEMIS, M.D.

4:00 PM	PRE-HOSPITAL AND IN-HOSPITAL PATIENT PREPARATION	*Charles Bemis, M.D.*
4:30 PM	MEDICAL POST-OP MANAGEMENT	*William S. Frankl, M.D.*
5:00 PM	COMPLICATIONS	*Mark Victor, M.D.*
5:30 PM	REHABILITATION	*Stuart Snyder, M.D.*

Designed for the physician in practice faced with the care of critically ill patients.
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Conferences are held in Lecture Hall "A"
Second Floor—New College Building
Hahnemann University, 15th and Vine Streets, Philadelphia, PA 19102

9 4-6 P.M.—Copewood Street, Camden
23 *(Cornell Institute for Medicine*
30 *Research)*

3 **Antibiotic Resistance**
12 noon-1:15 P.M.—Bridgeton
Hospital
(Bridgeton Hospital and AMNJ)

3 **Grand Rounds—Rehabilitation Medicine**
1:30-2:30 P.M.—New Jersey Medical
School, Newark
(UMDNJ)

3 **Department of Medicine Grand Rounds**
9-10 A.M.—St. Francis Medical
Center, Crean Hall, Trenton
(St. Francis Medical Center)

3 **Changes in Health Care—Delivery and Financing**
21 **CDS Prescribing Practices—Legal/Illegal**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

3 **Medieval Foods of Love**
10 **Nutritional Support of the Cancer Patient**
24 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical
Center, Annex. Aud., Rms. B and C,
Newark
(United Hospitals Medical Center and AMNJ)

3 **Pain Management Center**
10 8:00 A.M.—NJ Medical School,
17 100 Bergen Street, Newark
24 *(UMDNJ)*

3 **Urology Basic Science Conference**
10 3-4 P.M.—New Jersey Medical School,
17 Rm. C-600, Newark
24 *(UMDNJ)*

3 **Urology Grand Rounds**
10 4-6 P.M.—New Jersey Medical School,
17 Newark
24 *(UMDNJ)*

4 **Hyperalimentation**
28 **Nutrition and High Blood Pressure**
8:30 A.M.—Palisades General
Hospital, North Bergen
(Palisades General Hospital and AMNJ)

6 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson
Medical Center, Academic Health
Science Center, Rm. 393,
New Brunswick
(UMDNJ)

6 **University Hospital Tumor**
13 **Conference**
20 8:00 A.M.—University Hospital,
27 Newark
(UMDNJ)

7 **Pulmonary Conference**
14 8-9 A.M.—University Hospital,
21 Rm. H-349, Newark
28 *(UMDNJ)*

8 **Obesity**
10:30-11:30 A.M.—St. Mary's
Hospital, Passaic
(AMNJ)

8 **Office Management of Common Medical Issues**
12-4 P.M.—Kennedy Memorial
Hospital, Stratford
(UMDNJ)

8 **Urinary Tract Infections**
1:30 P.M.—Essex County Hospital
Center, Cedar Grove
(AMNJ)

10 **Current Clinical Concepts in Rheumatology/Immunology**
12:15-1:15 P.M.—Kennedy Memorial
Hospital, Conf. Rm., Stratford
(UMDNJ)

13 **Industrial Medicine: Chemicals and Health**
7 P.M.—Wallkill Valley General
Hospital, Sussex
(Wallkill Valley General Hospital and AMNJ)

14 **Hyperalimentation, Nutrition, and High Blood Pressure**
8:30 A.M.—Palisades General
Hospital, North Bergen
(AMNJ)

14 **University Echo Club**
7:30 P.M.—University Hospital,
Rm. H-349, Newark
(UMDNJ)

14 **Dermatology Meeting**
8-10 P.M.—Schering Corp.,
Kenilworth
(NJ Dermatological Society and AMNJ)

15 **Regional Urology Rounds**
7:00-8:30 A.M.—Robert Wood
Johnson Medical School,
Rm. 108-B, New Brunswick
(UMDNJ)

15 **Nonoperative Management of Chronic Back Pain**
9 A.M.—Warren Hospital,
Phillipsburg
(Warren Hospital and AMNJ)

15 **Nutritional Support in the Oncology Patient**
1-2 P.M.—West Hudson Hospital,
Kearny
(West Hudson Hospital and AMNJ)

15 **Interhospital Rheumatology Rounds**
4:30-6 P.M.—University Hospital,
Rm. I355, Newark
(UMDNJ)

15 **Dermatology Conferences**
6-9 P.M.—Rutgers Community
Health Plan
57 U.S. Hwy. 1, New Brunswick
(UMDNJ)

16 **To Be Announced**
5-6:30 P.M.—Somerset Medical
Center, Somerville
(AMNJ and Somerset Medical Center)

16 **CME Series**
5-6:30 P.M.—Somerset Medical
Center, Somerville
(Somerset Medical Center and AMNJ)

17 **Chronic Pain Management**
9 A.M.—St. Francis Medical Center,
Trenton
(St. Francis Medical Center and AMNJ)

21 **CDS Prescribing Practices Legal/Illegal**
12 noon—St. Mary's Hospital,
Orange
(St. Mary's Hospital and AMNJ)

21 **Salt-Wasting Nephropathy**
4-5 P.M.—Robert Wood Johnson
Medical School, Rm. 393,
New Brunswick
(UMDNJ)

21 **IVP Conference**
4-6 P.M.—New Jersey Medical School,
Newark
(UMDNJ)

23 **Nutrition and High Blood Pressure**
11 A.M.—St. Joseph's Hospital and
Medical Center, Paterson
(St. Joseph's Hospital and Medical Center and AMNJ)

23 **Visiting Professor Program**
4:00-5:00 P.M.—Saint Barnabas
Medical Center, Livingston
(AMNJ and Saint Barnabas Medical Center)

24 **Medical Implications and Symptoms of Alcohol Withdrawal**
10:45 A.M.—Greystone Park
Psychiatric Hospital
(Greystone Park Psychiatric Hospital and AMNJ)

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. . . designed for the Physician and provides an intensive
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pathophysiology and treatment of small vessel coronary artery disease

THURSDAY, MARCH 19, 1987
3:00-8:00 p.m.

SYMPOSIUM ON SMALL VESSEL CORONARY ARTERY DISEASE

MODERATOR: ABDULMASSIH S. ISKANDRIAN, M.D.

Syndrome X: Historial Perspective and Clinical Presentations	*Bernard L. Segal, M.D.*
Pathological Findings	*William C. Roberts, M.D.* *N.I.H.*
Reserve Coronary Blood Flow	*Robert A. Vogel, M.D* *Univ. of Maryland Hospital*
Hemodynamic, Metabolic and Exercise Studies	*Richard O. Cannon, M.D.* *N.I.H.*
Panel Discussion	*Jai Agarwal, M.D., Richard O. Cannon, M.D., Richard H. Helfant, M.D., Leonard N. Horowitz, M.D., Robert Katz, M.D. Terry Langer, M.D., William C. Roberts, M.D., Bernard L. Segal, M.D., Robert A. Vogel, M.D.*
Closing Remarks	*Richard H. Helfant, M.D.*

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Parking Available (at discount rate.)

29 **Annual William P. Burpeau Award Dinner**
6:30 P.M.—The Manor, West Orange
(Urology Section and AMNJ)

NEUROLOGY/PSYCHIATRY

March

4 **Deinstitutionalization/Management Issues of Chronic Patients**
8:30-10 A.M.—Elizabeth General Medical Center
(Elizabeth General Medical Center)

4 **Alzheimer's Disease**
8-9 A.M.—Somerset Medical Center, Somerville
(AMNJ and the State Departments of Health and Community Affairs)

4 **Grand Rounds**
10:30-12:00 P.M.—New Jersey Medical School, Newark
(UMDNJ)

5 **Case Seminars and Supervision**
19 **To Improve Psychotherapeutic Technique**
8-10 P.M.—312 Harding Dr., South Orange
(Advanced Psychiatric Study Group and AMNJ)

5 **Tardive Dyskinesia and Extrapyramidal Disorders Update**
12 **Neuroleptic Malignant Syndrome**
19 **Agoraphobia and Anxiety**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

5 **Neurology Grand Rounds**
12 3-5 P.M.—Robert Wood Johnson
19 Medical School, Med. Educ. Bldg.
26 Rm. 108A, New Brunswick
(UMDNJ-Robert Wood Johnson Medical School)

12 **Psychiatric Lecture Series**
1:00 P.M.—Essex County Hospital Center, Cedar Grove
(UMDNJ and Essex County Hospital Center)

13 **Alzheimer's Disease**
12 noon-1 P.M.—Freehold Area Hospital, Freehold
(NJ Departments of Health and Community Affairs and AMNJ)

17 **The Adolescent Maze: Traps and**
18 **Treatments**
All day—Carrier Foundation, Belle Mead
(Carrier Foundation)

20 **Temporal Lobe Epilepsy**
10:45 A.M.—Greystone Park Psychiatric Hospital
(Greystone Park Psychiatric Hospital and AMNJ)

April

1 **Treatment of Anxiety and Depression in the Elderly**
8:30-10 A.M.—Elizabeth General Medical Center
(Elizabeth General Medical Center)

2 **Case Seminars and Supervision**
16 **To Improve Psychotherapeutic Technique**
8:00-10:00 P.M.—312 Harding Drive, South Orange
(Advanced Psychiatric Study Group and AMNJ)

2 **Neurology Grand Rounds**
9 3-5 P.M.—Robert Wood Johnson
17 Medical School, Rm. 108A, Medical
23 Ed. Bldg., New Brunswick
30 *(UMDNJ)*

2 **The Somatizer: Diagnosis and Treatment**
9 **Hyperventilation Syndrome: The Brain and Heart Connection**
16 **Psychiatric Aspects of Terrorism**
30 **Mental Retardation and the Elderly**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

9 **Psychiatric Lecture Series**
1:00 P.M.—Essex County Hospital Center, Cedar Grove
(UMDNJ and Essex County Hospital Center)

16 **Alzheimer's Disease**
2-3 P.M.—John E. Runnels Hospital of Union County, Berkeley Heights
(NJ State Departments of Health and Community Affairs and AMNJ)

16 **Medical and Physical Aspects of Drugs and Alcohol Abuse**
3-4 P.M.—Ancora Psychiatric Hospital, Hammonton
(AMNJ)

17 **Anxiety Disorder: Diagnosis and Management**
7-8 P.M.—Trenton Psychiatric Hospital, Trenton
(Psychiatric Hospital and AMNJ)

22 **Women in 1987: Psychologically Free or Frantic?**
All day—Carrier Foundation, Belle Mead
(Carrier Foundation)

24 **Medical Implications and Symptoms of Alcohol Withdrawal**
10:45-11:45 A.M.—Greystone Park Psychiatric Hospital
(AMNJ)

28 **Suicide in Children and Adolescents**
8:30-10:30—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

OBSTETRICS/GYNECOLOGY

March

24 **Obstetrics Update**
8-10 P.M.—The Englewood Club
(Englewood Surgical Society and AMNJ)

27 **Semmelweis-Waters Obstetrical**
28 **and Gynecological Conference**
29 Resorts International Hotel, Atlantic City
(UMDNJ)

PATHOLOGY

March

3 **Pathology-G.I. Conference**
10 5:15-6:00—NJ Medical School,
17 Rm. C-555, Newark
24 *(UMDNJ)*
31

4 **Experimental Pathology Seminar**
18 12:00 noon—NJ Medical School, Newark
(UMDNJ)

4 **Pathology Grand Rounds**
11 1:30-5:30 P.M.—NJ Medical School,
18 Rm. C-555, Newark
25 *(UMDNJ)*

5 **Pathology/Radiology/Orthopedic**
12 **Conference**
19 8-9 A.M.—University Hospital,
26 Newark
(UMDNJ)

11 **Neuropathology Conference**
25 10:30-12:00 noon—NJ Medical School, Newark
(UMDNJ)

19 **Renal Pathology Conference**
4 P.M.—University Hospital, Rm. E-155, Newark
(UMDNJ)

April

1 **Pathology Grand Rounds**
8 1:30-5:30 P.M.—NJ Medical School,
15 Newark
22 *(UMDNJ)*
29

1 **Experimental Pathology Seminar**
15 12:00 noon—NJ Medical School,
29 Newark
(UMDNJ)

2 **Pathology/Radiology/Orthopedic**
9 **Conference**
16 8-9 A.M.—University Hospital,
23 Newark
30 *(UMDNJ)*

7 **Anatomic Pathology Specialty**
14 **Conference**
21 5:15-6:00—NJ Medical School,
28 C-555, Newark
(UMDNJ)

7 **Pathology-G.I. Conference**
14 3 P.M.—University Hospital, E-155,
21 Newark
28 *(UMDNJ)*

8 **Neuropathology Conference**
22 10:30-12:00 noon—NJ Medical School, Newark
(UMDNJ)

14 **Renal Biopsy Conferences**
12:30-2 P.M.—Barnert Memorial Hospital Center, Paterson
(AMNJ and Barnert Memorial Hospital Center)

16 **Renal Pathology Conference**
4 P.M.—University Hospital, Rm. E-155, Newark
(UMDNJ)

PEDIATRICS

March

3 **Smoothing the Road Home for the Child with Bronchopulmonary Dysplasia**
8 A.M.-3 P.M.—Woodbridge Hilton, Iselin
(Children's Specialized Hospital and AMNJ)

5 **Allergy, Immunology, and**
12 **Infectious Diseases**
19 11:00 A.M.—Children's Hospital,
26 Newark
(UMDNJ and Children's Hospital)

6 **Children's Pediatric Surgical**
13 **Conference**
20 8:00 A.M.—United Hospitals Medical
27 Center, Rm. A, Annex Bldg., Newark
(Children's Hospital of NJ and AMNJ)

6 **Advances in Pediatrics**
13 9:30-10:30 A.M.—NJMS, MSB,

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MORNING PROGRAM

8:30-8:45	Introduction
8:45-9:15	**Business Insurance** • Types • How Much and When
9:15-9:30	Questions and Answers
9:30-10:15	**Personnel** • What You Need • How To Find • Job Descriptions • Performance Reviews and Salary Reviews
10:15-10:30	Questions and Answers
10:30-11:00	**Systems** • Time Management • Charts and Records • Phones • Billing, Insurance, and Collection • Fees • Medicare
11:00-11:15	Questions and Answers
11:15-12:00	**Financial Management**
12:00-12:15	Questions and Answers
12:15-1:00	Luncheon

AFTERNOON PROGRAM

1:00-1:45	**Search for Right Opportunity** • How the Changing Complexion of Health Care Will Affect You • Professional Consideration in Selecting a Site • Personal Considerations • Financial Considerations
1:45-2:00	Questions and Answers
2:00-3:00	**Types of Practice** • Solo • Partnership • Group • HMOs
3:15-3:45	**Physical Facilities** • Space Requirements • Floor Plans • Patient and Work Flow
3:45-4:00	Questions and Answers
4:00	Adjournment

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20 Rm. B-610, Newark
27 *(UMDNJ)*

13 **Recent Advances in Immunology and Immunotherapy**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

24 **Enhancing the Effectiveness of Health Education**
8:30-10:30 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

April

3 **Children's Pediatric Surgical**
10 **Conference**
17 8:00 A.M.—United Hospitals Medical
24 Center, Rm. A, Annex Bldg., Newark
(Children's Hospital of NJ and UMDNJ)

3 **Advances in Pediatrics**
10 9:30-10:30 A.M.—NJMS, MSB,
17 Rm. B-610, Newark
24 *(UMDNJ)*

10 **Cardiac Arrhythmias in Children**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

21 **Rehabilitation of the Pediatric Head Trauma Patient**
8 A.M.-4:30 P.M.—Woodbridge Hilton, Iselin
(Children's Specialized Hospital and AMNJ)

RADIOLOGY

March

5 **Molecular Medicine Lecture**
12 **Series**
19 4-6 P.M.—Coriell Institute for
26 Medical Research, Copewood St., Camden
(Institute for Medical Research and AMNJ)

5 **Pathology/Radiology/Orthopedic**
12 **Conference**
19 8-9 A.M.—University Hospital,
26 Newark
(UMDNJ)

11 **Radiology Grand Rounds**
25 2 P.M.—University Hospital, Newark
(UMDNJ)

19 **Monthly Meeting**
7:30 P.M.—Saint Barnabas Medical Center, Livingston
(Radiological Society of NJ and AMNJ)

21 **Medical and Legal Issues in Diagnostic Ultrasound: Emphasis on Obstetrics and Gynecology**
8 A.M.-4 P.M.—Robert Wood Johnson Medical School, New Brunswick
(NJ Institute of Ultrasound in Medicine and AMNJ)

26 **Visiting Professor Program**
1:30 P.M.—Saint Barnabas Medical Center, Livingston
(Saint Barnabas Medical Center and AMNJ)

April

2 **Pathology/Radiology/Orthopedic**
9 **Conference**
16 8-9 A.M.—University Hospital,
23 Newark
30 *(UMDNJ)*

8 **Radiology Grand Rounds**
2 P.M.—University Hospital, Newark
(UMDNJ)

10 **Nuclear Hazards**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

28 **MRI Update**
8-10 P.M.—Englewood Club, Englewood
(The Englewood Surgical Society and AMNJ)

SURGERY

March

2 **Surgical Grand Rounds**
9 4:30-6 P.M.—NJ Medical School,
16 Newark
23 *(UMDNJ)*
30

3 **Surgery: Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Rm. 102, New Brunswick
(UMDNJ)

4 **Trauma Conference**
11 8:00 A.M.—University Hospital,
18 Newark
25 *(UMDNJ)*

4 **Surgical Grand Rounds**
11 8:30-10 A.M.—Robert Wood Johnson
18 Medical School, Rm. 102,
25 New Brunswick
(UMDNJ)

6 **Cancer Research Colloquium**
13 12-1:15 P.M.—NJ Medical School,
20 MSB Bldg., G-506B, Newark
27 *(UMDNJ)*

11 **Meeting of NJ Society of Colon and Rectal Surgeons**
6:30 P.M.—The Manor, West Orange
(NJ Society of Colon and Rectal Surgeons and AMNJ)

24 **Obstetrics Update**
8-10 P.M.—The Englewood Club
(Englewood Surgical Society and AMNJ)

27 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridge Drive, West Orange
(UMDNJ)

April

1 **Trauma Conference**
8 8:00 A.M.—University Hospital,
15 Newark
22 *(UMDNJ)*
29

1 **Grand Rounds**
10:30-12:00 P.M.—New Jersey Medical School, Newark
(UMDNJ)

1 **Surgical Grand Rounds**
8 8:30-10 A.M.—Robert Wood Johnson
15 Medical School,
22 Rm. 102, New Brunswick
29 *(UMDNJ)*

2 **Management of Abdominal Emergencies**
11:00 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(AMNJ)

3 **Cancer Research Colloquium**
10 12-1:15 P.M.—New Jersey Medical
17 School, MSB Bldg., G-506B, Newark
24 *(UMDNJ)*

4 **Mortality and Morbidity**
11 **Conference**
18 8:30-9:30 A.M.—NJ Medical School,
25 MSB, New Brunswick
(UMDNJ)

6 **Surgical Grand Rounds**
13 4:30-6 P.M.—NJ Medical School,
20 Newark
27 *(UMDNJ)*

7 **Surgery-Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Rm. 102, New Brunswick
(UMDNJ)

24 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive, West Orange
(UMDNJ)

SURGICAL SPECIALTIES

March

2 **Orthopedic Grand Rounds and**
9 **Lecture Series**
16 6-8 P.M.—NJ Medical School, MSB,
23 B-556, Newark
30 *(UMDNJ)*

5 **Pathology/Radiology/Orthopedic**
12 **Conference**
19 8-9 A.M.—University Hospital,
26 Newark
(UMDNJ)

5 **Vascular Surgery Conference**
12 **Rounds**
19 4-5 P.M.—Robert Wood Johnson
26 Medical School, Med. Educ. Bldg.,
New Brunswick
(UMDNJ)

18 **Grand Rounds in Ophthalmology**
7-9 P.M.—Eye Institute of NJ, Annex Auditorium, Rms. B and C, Newark
(UMDNJ and Affiliated Eye Residency Program)

26 **Distinguished Lecturer Series—Neurosurgery**
4-5:30—University Hospital, Rm. E-343, Newark
(UMDNJ)

April

2 **Vascular Surgery Conference**
9 **Rounds**
16 4-5 P.M.—Robert Wood Johnson
23 Medical School, Medical Ed. Bldg.,
30 New Brunswick
(UMDNJ)

6 **Orthopedic Grand Rounds and**
13 **Lecture Series**
20 6-8 P.M.—NJ Medical School, MSB,
27 B-556, Newark
(UMDNJ)

15 **Grand Rounds in Ophthalmology**
7-9 P.M.—Eye Institute of NJ, Newark
(UMDNJ and Affiliated Eye Residency Program)

23 **Distinguished Lecturer Series—Neurosurgery**
4-5:30—University Hospital, Rm. E-343, Newark
(UMDNJ)

MISCELLANEOUS

March

9 **Malpractice**
7 P.M.—Wallkill Valley General Hospital, Sussex
(AMNJ)

April

1 **Cost Containment**
10:30 A.M.—St. Mary's Hospital, Passaic
(AMNJ)

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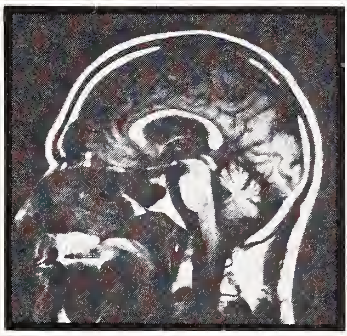

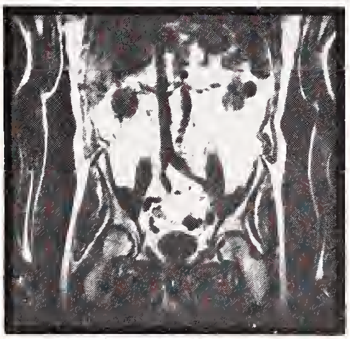

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LETTERS TO THE EDITOR

Medical Records

October 8, 1986

Dear Dr. Krosnick:

The October 1986 issue focusing on medical records proved most interesting. I would suggest, however, that the optimum beneficiary these days is the PRO which judges a patient's welfare and quality of care completely on the basis of the medical record. This makes the patient come out a poor third in the lottery.

However, the subject of medical records should not ignore the fact that the New Jersey Board of Nurses refuses to require nurses to document lapses in nursing care to hospitalized patients. Thus, medication doses that are missed, meals that are missed, excessive stays in x-ray, or patients lying in their own swill for hours do not have to be documented or explained. Yet each of these may compromise patient care for which the doctor may be blamed. If, for example, a patient in gram negative sepsis arrives, and the doctor writes for an aminoglycoside which is not delivered for eight hours because the order failed to get to the pharmacy on time, these details will not be found on the chart.

I had a case where I discontinued saline. The nurse for reasons known only to herself substituted distilled water and drowned the patient. When the nursing board, upset at the disclosure, sent two investigators to my office, I referred them to the hospital, where, as far as I know, the case could not be reconstructed.

I think the membership should think hard about this issue, and urge the nursing board to require that such lapses be documented, so that the doctors, held accountable for patient care, will be able to reconstruct records in conflicts with PRO on quality care, as well as in litigations.

(signed) Charles Harris, M.D.

October 16, 1986

Dear Dr. Krosnick:

I was pleased to see the subject of medical records as the cover story in the October issue of *NEW JERSEY MEDICINE.* At the Medical Board, we long have been concerned with the issue of inadequate records. Hopefully, physicians will be more aware of the extreme importance of not only practicing good medicine but properly recording that practice.

Physicians must be reminded that in today's mobile society, their medical records in many cases will be depended upon by other health care providers. They should prepare their records so that not only are they complete but they also are sufficiently clear so they can be utilized by other physicians who may be called upon to serve the patient.

Recently, we have received a number of complaints concerning the issue of confidentiality of the medical record. This most often involves issues concerning private industry and insurance companies. Therefore, a new Medical Records Rule is in draft stage and soon will be presented to the full Board.

(signed) Michael B. Grossman, D.O.
Secretary, New Jersey State
Board of Medical Examiners

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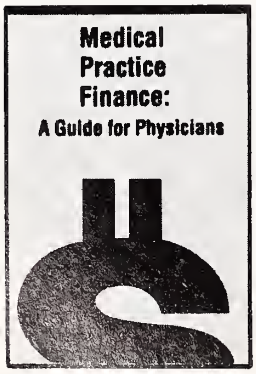

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BOOK REVIEWS

The American Cancer Society Cancer Book; Contact Dermatitis; Head and Neck Cancer

The American Cancer Society Cancer Book

Arthur I. Holleb, M.D., (ed). Garden City, NY, Doubleday & Company, 1986. ($12.95)

Every year, cancer strikes some 900,000 people, involving three out of four American families. Whereas half of all cancer patients could be cured using current methods of detection and treatment, fear and ignorance of cancer too frequently lead to delays in diagnosis and failure of cure.

The American Cancer Society Cancer Book is a remarkably comprehensive and eminently readable reference source for the general public. Edited by Arthur I. Holleb, M.D., the ACS's Senior Vice-President for Medical Affairs, and written by more than 40 prominent cancer authorities, this book provides a comprehensive look at the cancer situation today. Fourteen chapters deal with such topics as attitudes toward cancer, prevention, concepts of treatment, the role of clinical research, rehabilitation, and basic biologic principles. Another 20 chapters are devoted to specific cancers and their management. An appendix lists various social resources to be contacted for needed help. Suggestions for further reading also are included.

The subject matter is extremely well organized and lucidly and optimistically presented. This work should go far to overcome with knowledge the fear and ignorance that surrounds this formidable disease.

Alan J. Lippman, M.D.

Contact Dermatitis, 3rd Edition

Alexander A. Fisher, M.D. Philadelphia, PA, Lea & Febiger, 1986. Pp. 954. ($72.50)

A very senior, very active Dr. Fisher continues a long career, pursuing and reporting on the villainous molecules in our environment that discomfort and disable the skin. His authoritative textbook can be considered the "Bible" of contact dermatitis, not only for its indispensable guidance, but now for its new, mammoth size. The first edition (1967) of 324 pages and 2¼ pounds, begat the 448-page, 2½-pound second edition (1973) which begat the current edition of 954 pages and 4½ pounds of almost everything you would like to know on the subject. Additions include new etiological agents, an expanded portion on the recently recognized entity of contact urticaria, an updating of the immunology of the allergic reaction, and a description of the complex interactions between substances derived from epidermal cells (keratinocytes and Langerhans cells) and T lymphocytes. A brief chapter, "Computers and Contact Dermatitis," is not a discourse on reactions to the devices, but a listing of available data bases and of international centers that monitor adverse reactions to drugs; where to obtain current information quickly via the telephone and computer.

As in previous editions, the text is an uneven blend of personal clinical vignettes, which provide memorable and practical advice, mingled with uncritical citations of almost any work published on the particular subject. Fortunately, it retains the format of highlighting in summary boxes, which allows the reader the option to scan when the details become burdensome.

No medical reference library will be complete if it lacks *Contact Dermatitis*, and a personal copy will be valued by the practicing physicians who confront the daunting task of identifying, treating, and preventing damage to the largest organ that interfaces with the environment, the skin.

Christopher M. Papa, M.D.

Head and Neck Cancer: Clinical Decisions and Management Principles

McQuarrie, Adams, Shons, Browne (eds). Chicago, IL, Year Book Medical Publishers, Inc., 1986. Pp. 537. Illustrated.

Management of patients with head and neck cancer often is complex and always challenging. Decision making must take into account an awesome variety of clinical presentations and a myriad of approaches involving a multidisciplinary team of surgeons, radiation therapists, and internists, all of whom must act in concert to optimize individual patient care. Effective management cannot be dogmatic but requires clearly thought decision processes based on logical analyses.

Dr. McQuarrie, Professor of Surgery at the University of Minnesota-Minneapolis VA Medical Center, and his colleagues and collaborators have brought forth an outstanding text which addresses these complex issues forthrightly and intelligently.

The book is well organized, with three distinct divisions. Early chapters are concerned with the general approach to common head and neck problems and the decision process. The central chapters analyze particular types of tumors. A final series of chapters concerns unique problems, complications of treatment, supportive care, and newer approaches to treatment.

A refreshing style commands the reader's interest. Utilizing a Socratic type of question-and-answer format, with ample use of appropriate decision algorithms, the authors highlight the major issues and focus attention clearly on the methods by which the patient management decisions can be made most effectively.

The book is highly recommended for surgical residents and subspecialty fellows in this field but should be of value as well for all oncologists who daily deal with these situations.

Alan J. Lippman, M.D.

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OBITUARIES

Drs. Baker; Cricco; Del Pino; Doran; Figurelli; Grubowski; Lin; Miller; Mishra; Mueller; Nowakiwskyj; Shipps; Simon; Weeks; Wright

Dr. Maclyn Baker

We just have been informed of the death of Maclyn Baker, M.D., on October 25, 1985. Dr. Baker, a surgeon, had been living in Palm Beach, Florida, since his retirement. Born in 1898 in New York City, he was graduated from Bellevue Hospital Medical College in that city, in 1924. Dr. Baker had been a member of our Essex County component and of the American Medical Association. While active, his office was located in Irvington. Dr. Baker was a Fellow of the American and International Colleges of Surgeons, and had been director of the emergency room at Irvington General Hospital. In 1974, he was a recipient of MSNJ's Golden Merit Award, honoring his 50th anniversary as a physician.

Dr. Carl F. Cricco, Sr.

A surgeon in Hoboken for many years, Carl F. Cricco, Sr., M.D., died on October 27, 1986, in St. Mary Hospital in that city, at the age of 72. A lifelong resident of Hoboken, Dr. Cricco was graduated from the University of Bologna School of Medicine (Italy) in 1940. He was a member of our Hudson County component and of the American Medical Association. Dr. Cricco had been affiliated with Riverside Medical Center, Secaucus, and St. Mary Hospital, Hoboken. He was a Fellow of the International College of Surgeons, of the International Academy of Proctology, and of the International College of Proctology. During World War II, Dr. Cricco served at the 54th Evacuation Hospital during the invasion of Anzio Beach. He was awarded the Order of the Crown Lion from the Italian government and the Bronze Star from the United States. He attained the rank of major.

Dr. Jose M. Del Pino

At only 56 years of age, Jose M. Del Pino, M.D., a Union City surgeon, died on August 5, 1986. Born in Cuba, Dr. Del Pino received his medical degree from the Faculty of Medicine of the University of Havana, Cuba, in 1959. In 1978, he became a member of our Hudson County component. Dr. Del Pino had been affiliated with Christ and St. Francis Hospitals in Jersey City, the Jersey City Medical Center, and St. Joseph's Hospital, New York.

Dr. Ralph J. Doran

A Hoboken dermatologist, identified as a friendly, caring physician, Ralph Joseph Doran, M.D., died on September 4, 1986, in St. Mary Hospital, Hoboken, at the advanced age of 82. Dr. Doran had practiced his specialty in the same office for 53 years prior to his retirement in 1984. He was graduated from Georgetown University School of Medicine in 1929, and was a member of our Hudson County component and of the American Medical Association. Dr. Doran was a Fellow of the American Geriatric Society and of the International College of Anesthetists. He had been affiliated with St. Mary's Hospital, Hoboken, and the Skin and Cancer Center of University Hospital, New York City. For more than 30 years, Dr. Doran had served as medical director of Globe Insurance Company of New York. In 1979, MSNJ conferred on Dr. Doran its Golden Merit Award, in recognition of his 50 years in medicine.

Dr. Francesco A. Figurelli

Francesco A. Figurelli, M.D., a retired neuropsychiatrist in Jersey City, died on October 21, 1986, at Jersey City Medical Center. Born in 1914, in Jersey City, Dr. Figurelli was graduated from the Faculty of Medicine at the University of Naples (Italy) in 1938. He was a member of our Hudson County component and of the American Medical Association. Dr. Figurelli had served as associate director of the psychiatry department at Jersey City Medical Center for eight years; was affiliated with Pollak and Greenville Hospitals, both in Jersey City, and St. Mary Hospital, Hoboken. He was civic minded: was medical advisor for the Jersey City Commission for Retarded Children, a member of the advisory board for the Hudson County Board of Mental Health, and psychiatrist for the Jersey City Board of Education.

Dr. Joseph N. Grubowski

A practitioner of family medicine in Jersey City for over 30 years, Joseph N. Grubowski, M.D., died on October 15, 1986, at the age of 74. A native of Jersey City, Dr. Grubowski was graduated from Long Island College of Medicine in 1938. He became a member of our Hudson County component and of the American Medical Association. Dr. Grubowski was a Fellow of the American Association for the Advancement of Science. He had been affiliated with St. Francis Community Health Center, Jersey City. During World War II, Dr. Grubowski served in the medical corps of the Army of the United States, attaining the rank of captain.

Dr. Hazel A. C. Lin

Hazel A. C. Lin, M.D., a Jersey City gynecologist, died on August 7, 1986. Born in Foochow, China, in 1913, Dr. Lin was graduated from the University of Michigan Medical School in 1939. In 1950, she came to the state of New Jersey and became a member of our Hudson County component and of the American Medical Association. She was a Fellow of the International College of Surgeons, and had been affiliated with Greenville Hospital, Jersey City. Dr. Lin was a prolific writer and two of her novels had received awards.

Dr. Thomas E. Miller

A family practitioner in Pompton Plains for over 30 years, Thomas Ellsworth Miller, M.D., died on August 16, 1986, at the age of 74. Born in Altoona, Pennsylvania, Dr.

Miller was graduated from Hahnemann Medical College, Philadelphia, in 1946. He was a member of our Morris County component, and had been affiliated with The Mountainside Hospital, Montclair and Chilton Memorial Hospital, Pompton Plains. Dr. Miller had served with the medical branch of the United States Army in World War II, attaining the rank of captain.

Dr. Diwakar Mishra

After suffering a massive stroke on August 28, 1986, Diwakar Mishra, M.D., died at Bridgeton Hospital on September 7th, at only 46 years of age. Born in India, Dr. Mishra was graduated from Prince of Wales Medical College, Patna, India, in 1962. He came to the United States to do his internship, and became a member of our Camden County component in 1975. Dr. Mishra established his practice of ophthalmology in Cherry Hill; in 1981, he transferred his membership to our Salem County component, upon moving his practice to the town of Salem. Dr. Mishra was a Diplomate in ophthalmology, and had been affiliated with the Camden, Berlin, and Voorhees facilities of the West Jersey Health System.

Dr. Erich V. Mueller

Erich Vincent Mueller, M.D., a family practitioner in Summit, died on July 23, 1986, while on vacation in Germany. He was only 66 at the time of his death. Born in Ziegelhausen, Germany, Dr. Mueller was graduated from the Medical Faculty of the University of Heidelberg, Germany, in 1949. He became a naturalized citizen of the United States in November 1959. Dr. Mueller was a member of our Union County component and of the American Medical Association. He had been affiliated with Overlook Hospital, Summit.

Dr. Iwan Nowakiwskyj

An anesthesiologist in Jersey City for almost 30 years, Iwan Nowakiwskyj, M.D., died on October 22, 1986, at the age of 74. Born in the Ukraine, Dr. Nowakiwskyj received his medical degree from the University of Innsbruck, Austria, in 1950. He emigrated to the United States and became a member of our Hudson County component and of the American Medical Association. Dr. Nowakiwskyj was affiliated with St. Francis Community Health Center, Jersey City.

Dr. Hammell P. Shipps

A retired gynecologist, Hammell Pierce Shipps, M.D., died on September 30, 1986, at Zurbrugg Memorial Hospital, Riverside, at the venerable age of 86. Dr. Shipps divided his retirement years between Moorestown and Venice, Florida. A native of New Jersey, he received his medical degree from Jefferson Medical College, Philadelphia, in 1926. Dr. Shipps was a member of our Camden County component and of the American Medical Association. He was a Diplomate in obstetrics and gynecology, and was a Fellow of the American College of Surgeons and of the American College of Obstetricians and Gynecologists. Dr. Shipps had been affiliated with the Cooper Medical Center, Camden, and Zurbrugg Memorial Hospital. He had been an associate professor emeritus of obstetrics and gynecology at Jefferson Medical College. In 1976, MSNJ bestowed on Dr. Shipps its Golden Merit Award in recognition of his 50 years of service as a physician.

Dr. Erich H. W. Simon

Erich Hermann-Wilhelm Simon, M.D., a well-known Trenton neurologist for almost 25 years, died at home, on September 19, 1986, at the untimely age of 58. Born in Germany, Dr. Simon received his medical degree from the University of Munster, West Germany, in 1955, and emigrated to the United States for his internship. He was a Diplomate in neurology, and was a member of our Mercer County component and of the American Medical Association. He had been affiliated with Mercer Medical Center, St. Francis Medical Center, Helene Fuld Medical Center, and Hamilton Hospital, all in Trenton.

Dr. David M. Weeks

We just have been informed of the death of David Merrill Weeks, M.D., a retired surgeon from Englewood. Born in South Bend, Indiana, in 1903, Dr. Weeks was graduated from the University of Michigan Medical School, Ann Arbor, in 1927. He initially established a practice in New York City, becoming a member of our Bergen County component in 1967. Dr. Weeks also was a member of the American Medical Association. He was a Diplomate in surgery, and a Fellow of the American College of Surgeons. Prior to retirement, he had been affiliated with Roosevelt Hospital and Bellevue Hospital, New York City, and with Bergen Pines County Hospital, Paramus. Dr. Weeks was assistant clinical professor of surgery at Columbia University's College of Physicians and Surgeons. In 1977, he was a recipient of MSNJ's Golden Merit Award, honoring his 50 years in medicine.

Dr. Herman W. Wright

A retired practitioner of general medicine, Herman Wilder Wright, M.D., died on February 18, 1986, at the advanced age of 84. Dr. Wright terminated his practice in Pitman ten years ago, and moved to Raleigh, North Carolina, to help care for a son who was injured seriously in a skiing accident. He had been a member of our Gloucester County component and of the American Medical Association. Dr. Wright was graduated from Jefferson Medical College, Philadelphia, in 1930. During World War II, he served in the medical corps of the United States Air Force, attaining the rank of major. In 1980, Dr. Wright received MSNJ's Golden Merit Award, in honor of his 50th anniversary as a physician.

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A PRACTICAL MANAGEMENT SEMINAR FOR RESIDENTS
WEDNESDAY, MARCH 11, 1987
8:30 A.M.-4:00 P.M.
at the Executive Offices of the
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MORNING PROGRAM

8:30-8:45	Introduction
8:45-9:15	**Business Insurance** • Types • How Much and When
9:15-9:30	Questions and Answers
9:30-10:15	**Personnel** • What You Need • How To Find • Job Descriptions • Performance Reviews and Salary Reviews
10:15-10:30	Questions and Answers
10:30-11:00	**Systems** • Time Management • Charts and Records • Phones • Billing, Insurance, and Collection • Fees • Medicare
11:00-11:15	Questions and Answers
11:15-12:00	**Financial Management**
12:00-12:15	Questions and Answers
12:15-1:00	Luncheon

AFTERNOON PROGRAM

1:00-1:45	**Search for Right Opportunity** • How the Changing Complexion of Health Care Will Affect You • Professional Consideration in Selecting a Site • Personal Considerations • Financial Considerations
1:45-2:00	Questions and Answers
2:00-3:00	**Types of Practice** • Solo • Partnership • Group • HMOs
3:15-3:45	**Physical Facilities** • Space Requirements • Floor Plans • Patient and Work Flow
3:45-4:00	Questions and Answers
4:00	Adjournment

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MEDICAL SOCIETY OF NEW JERSEY—221st ANNUAL MEETING

#132

AUTHOR INFORMATION

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CONTENT

The educational content of each issue appears as scientific articles, based on research, original concepts relative to epidemiology of disease, and treatment methodology; case reports based on unusual clinical experiences; review articles; clinical notes, succinct items on some aspect or new observation or technique of a case experience; and special articles, which include evaluations, policy and position papers, and reviews of nonscientific subjects. Other topics include commentary (critical narration); medical history; therapeutic drug information; pediatric briefs; nutrition update; and an opinion column. Editorials are prepared by the Editor and by guest contributors on timely and relevant subjects; editorials are the responsibility of the author. The Doctors' Notebook section contains organizational, informational, and administrative items from MSNJ and from the community. Letters to the Editor and book reviews are welcome and will be published as space permits. The principal aim in the preparation of a contribution should be relevance to diagnosis and treatment and to education of patients and professionals. Preference will be given to professional authors from New Jersey and to out-of-state lecturers who submit a suitable manuscript based on a presentation made in New Jersey.

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Authors are asked to seek clarity, accuracy, and originality; attention to details of grammar, spelling, and typing are important.

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Tables must be typewritten and double-spaced on separate 8½" by 11" sheets, with a title and number. Symbols for units should be confined to column headings, and abbreviations, properly explained, should be kept to a minimum.

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2. Dixon WJ, Massey FJ: *Introduction to Statistical Analysis.* New York, NY, McGraw-Hill, 1969, pp. 42-48.

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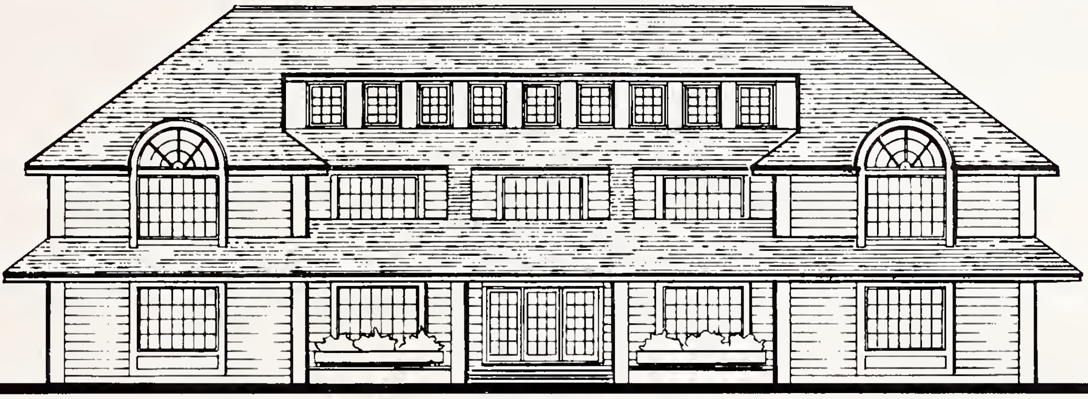

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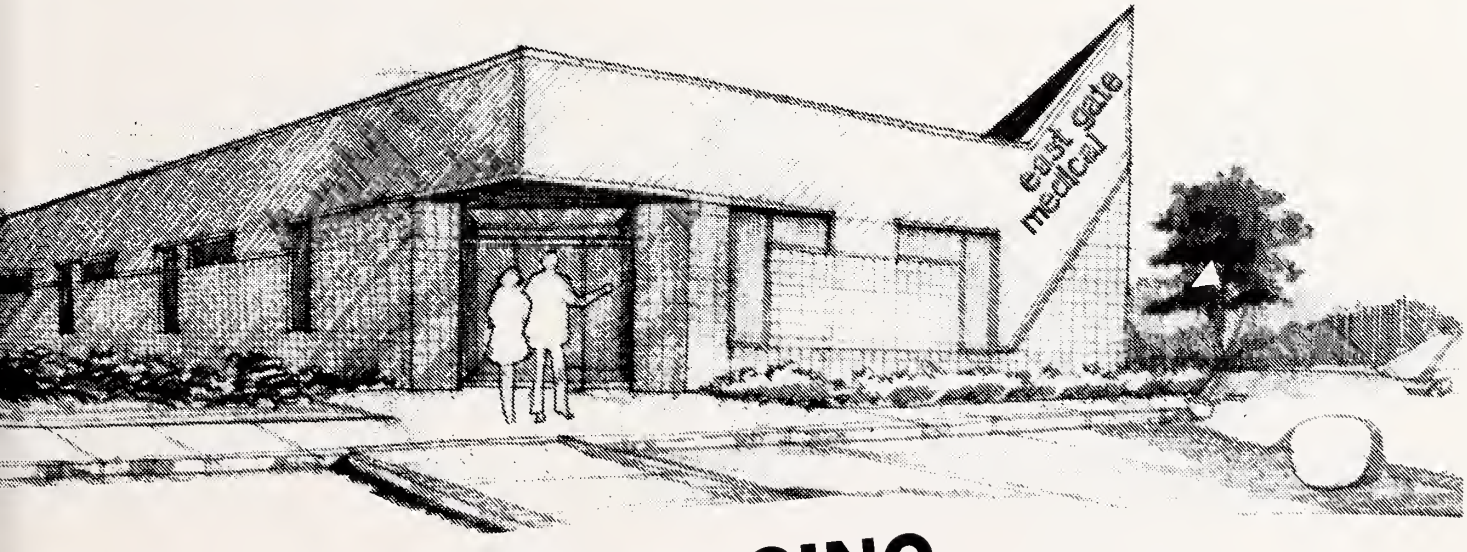

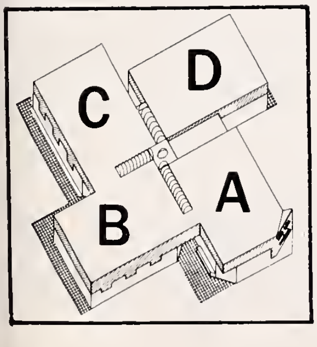

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THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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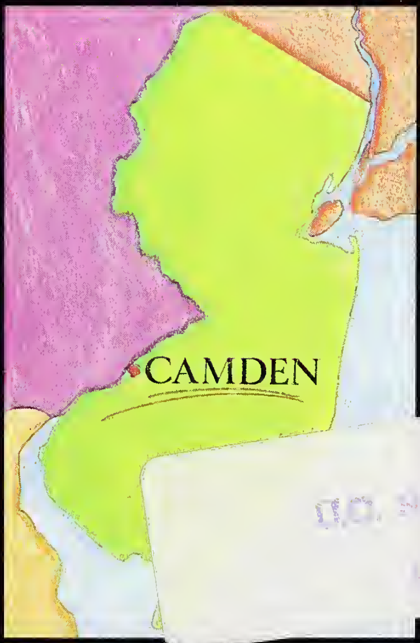

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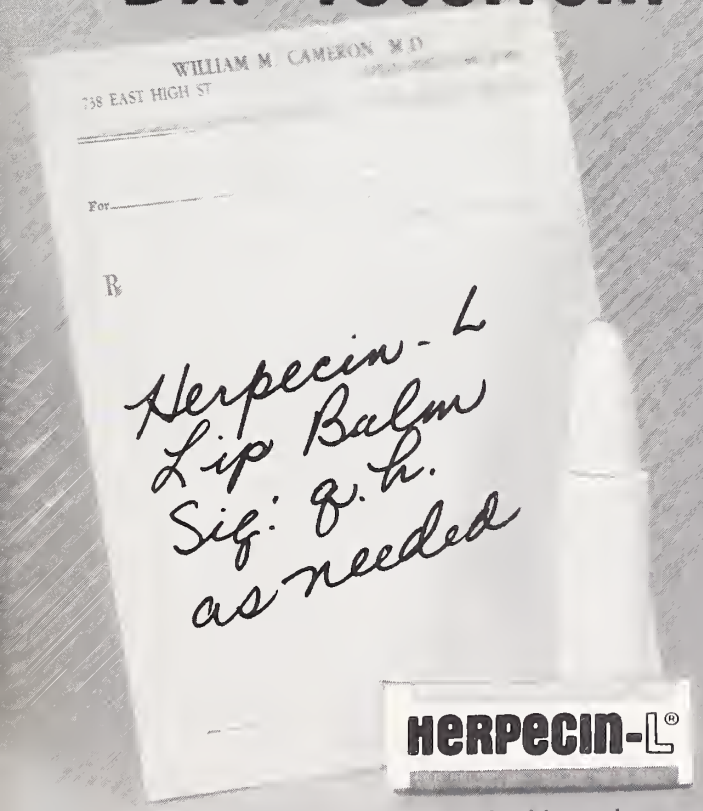

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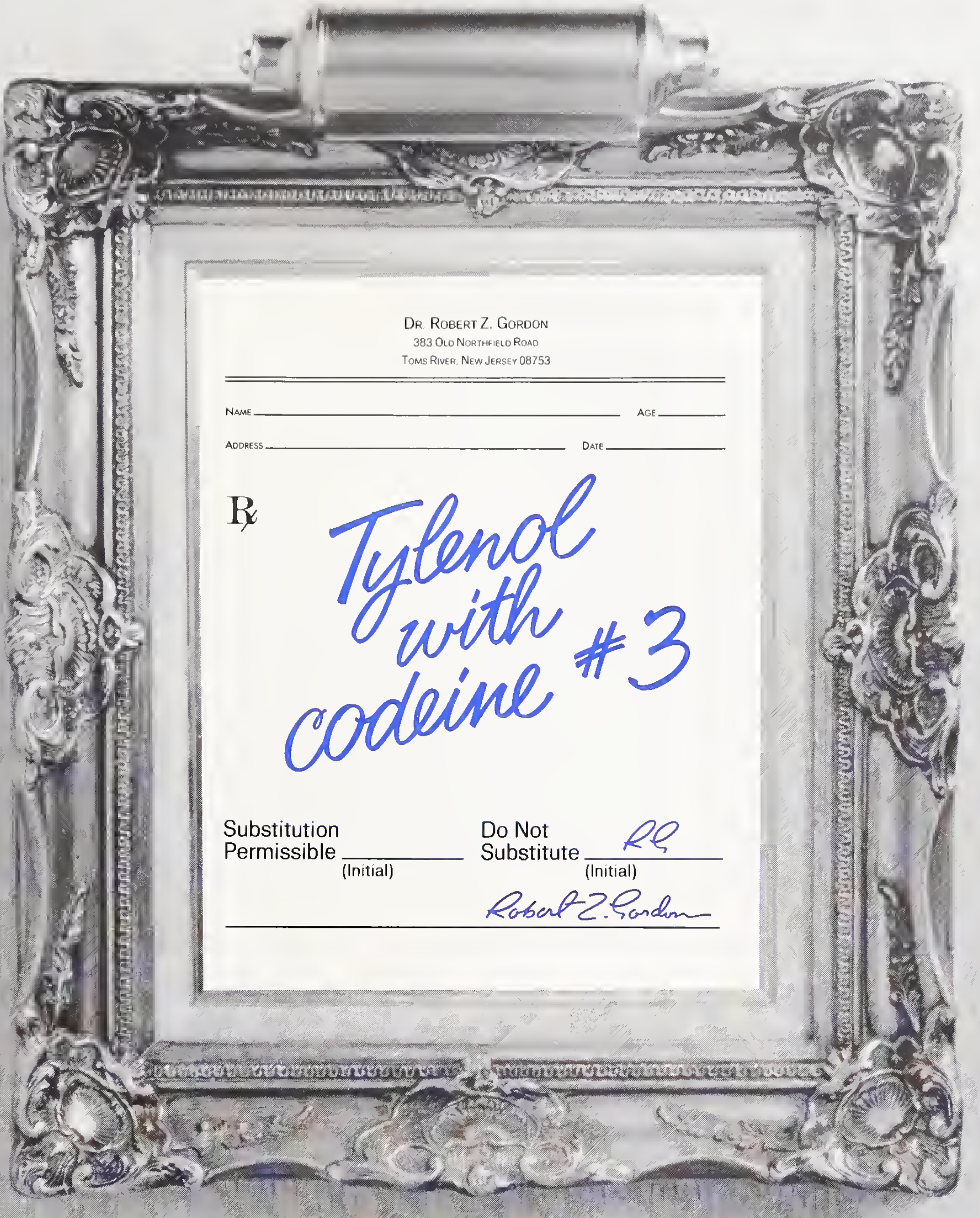

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THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY MARCH 1987

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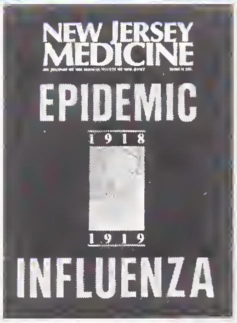
On The Cover: Epidemics usually are associated with panic and desolation; a study of the 1918 influenza epidemic failed to reveal such characteristics. Our story begins on page 173. Cover design by Frank Cecala.



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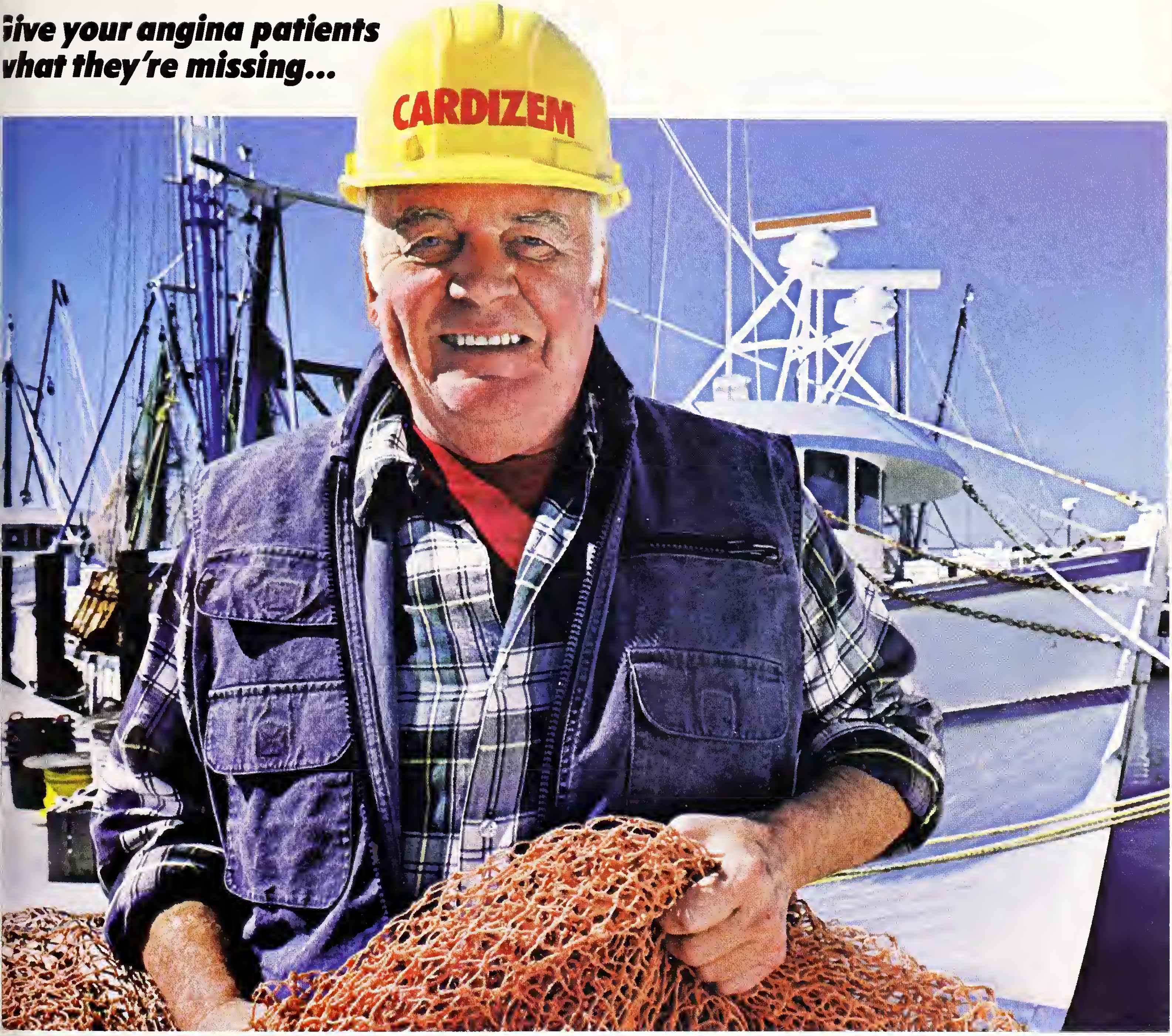

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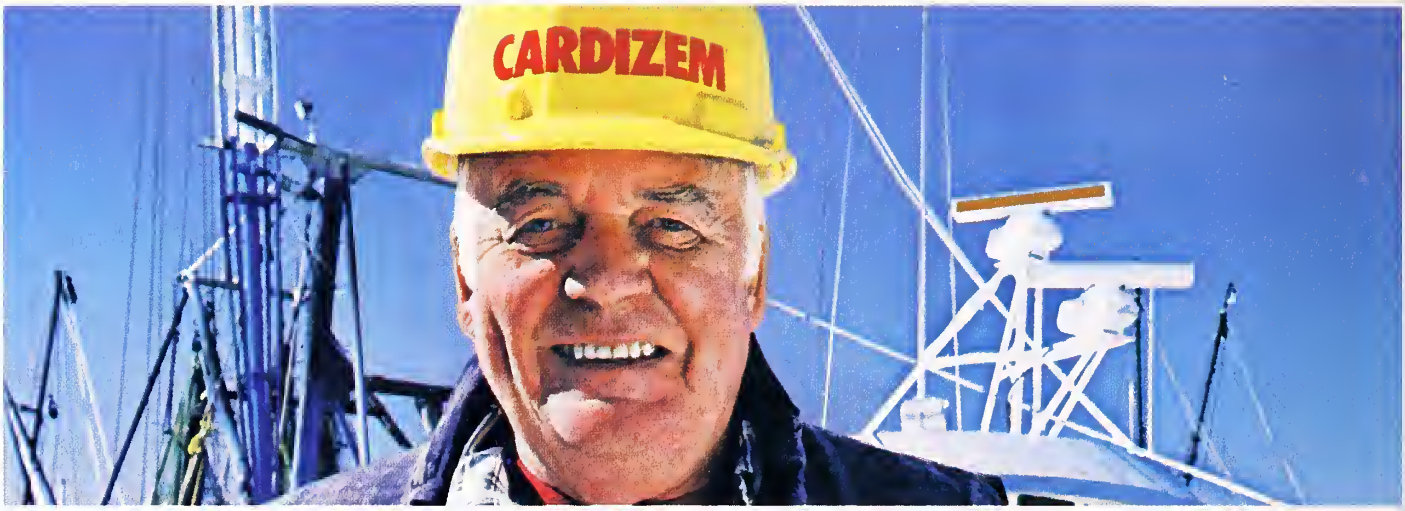

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CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusio, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. Issued 7/86
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PROFESSIONAL LIABILITY COMMENTARY*

Insurance Coverage

Standard of Care for General Surgeon; Report on Professional Liability; Off-Shore Insurers

INDIANA COURT LIMITS STANDARD OF CARE

In an era in which specialty training has become standard and subspecialty training is common, there is bound to be some degree of clinical overlap in the different practices. From a legal perspective, this poses problems in deciding to which standard of care a physician should be held, as a recent Indiana appellate decision illustrates.

On July 4, 1980, a patient went to the emergency room of a community hospital complaining of right lower abdominal pain, nausea, and a missed menstrual period. Earlier that day her physician had drawn blood for testing to determine if she was pregnant. The general surgeon on call examined her in the emergency room. Among other things, he ordered two urine tests for pregnancy, one of which was positive. On the basis of the history and examination the physician admitted the patient for observation, noting an ectopic pregnancy was possible. He treated her with antibiotics for possible recurrent pelvic inflammatory disease.

The next day, the pregnancy confirmed by the more sensitive blood test, the physician ordered an ultrasound test; that study had "little diagnostic value." Meanwhile, the patient had "rapidly improved." On July 17 at her request, the physician discharged the patient, still warning her that she might have an ectopic pregnancy. He also informed her family physician. On August 8, the patient went to a third physician—an obstetrician-gynecologist—again complaining of pain and bleeding. He took her to surgery and removed a ruptured ectopic pregnancy. The patient sued the general surgeon. The jury found in favor of the defendant, and the plaintiff appealed.

The key issue on appeal was whether the court had erred in refusing certain of the plaintiff's jury instructions or in permitting testimony by an expert witness. As to the jury instructions, the plaintiff argued that because the physician agreed to treat her for an obvious gynecological problem, he should be held to the standard of care of a gynecological surgeon, a position the judge refused to adopt.

Noting that the physician "at all times held himself out as a general surgeon, and that the patient was not referred to nor was she seeking any particular specialist," the appellate court rejected her claim. Speaking directly to her view of the appropriate standard, the high court approved language from another case that argued: "The mere fact that two specialists may treat the same symptoms or perform the same operation does not imply that a physician's conduct will no longer be tested by the standards of his own school or specialty."

As for the argument that expert testimony had been admitted erroneously, the appellate court noted that the testimony in question was that of an obstetrician-gynecologist who had sat on a statutorily required medical review panel. The statute permits any licensed physician to help resolve whether the evidence supports the conclusion that a standard of care was breached. The physician was reporting on the panel's findings. The fact that he was a different specialty, therefore, was not an issue.

The message in this case is that specialists should not be subjected to a different standard of care simply because they stray into clinical areas that overlap those of other specialists. (*Medical Liability Monitor*, Vol. 11, No. 11, November 24, 1986).

REPORT ON PROFESSIONAL LIABILITY

The General Accounting Office (GAO) of the United States has published its second report on professional liability: *Medical Malpractice Insurance: Insurance Costs Increased but Varied among Physicians and Hospitals*. The report, which contains no policy recommendations, supplements existing information on the cost of professional liability coverage for both physicians and hospitals with data gathered through the following methods:

- In each of the 50 states and the District of Columbia, GAO identified an insurer that was the leading provider of professional liability coverage to physicians. Each of these insurers then was asked to provide premium quotations as of July 1, 1985, for the prevailing form of coverage in seven specialties: family practice, internal medicine, neurosurgery, general surgery, anesthesiology, obstetrics/gynecology, and orthopedic surgery.
- GAO surveyed a nationally representative sample of nonfederal hospitals to determine the sources, limits, and costs of their professional liability coverage so that the full extent of both premium costs, contributions to self-insured trusts and uninsured losses could be assessed.

The survey of physician premiums found a concentration of annual premiums of $50,000 or more in four states—Florida, Michigan, New York, and Illinois—and

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*This item from the Department of Professional Liability Control, MSNJ, was prepared by James E. George, M.D., J.D., and A. Ronald Rouse, who are the Director of the Department and Director of Special Projects, respectively.

TABLE

Premiums

Specialty	State	High	State	Low
Internal medicine	Michigan	$ 8,445	Indiana	$1,293
General/family practice	Florida	12,156	Oklahoma	2,120
Neurosurgery	Florida	64,696	S. Carolina	9,150
General surgery	Florida	30,736	S. Carolina	5,809
Anesthesiology	Arizona	35,232	Arkansas	5,407
Obstetrics/gynecology	Florida	51,112	S. Carolina	6,922
Orthopedic surgery	Illinois	56,088	New Mexico	7,932

in the District of Columbia. Within each specialty, the state to state variation in premium costs was considerable as the Table of premiums illustrates.

The GAO survey of hospitals found that the cost of these institutions' professional liability insurance premiums, contributions to self-insured trust funds, and uninsured losses had increased 57 percent in the period 1983 to 1985. By 1985, the cost per inpatient day of these expenses had reached $5.60 although 12 percent of the institutions surveyed indicated a per inpatient day cost of $10 or more. The average annual cost per bed amounted to $1,784. The survey also found a tendency of hospitals to increase the limitations of their liability coverage and a trend toward joint coverage in which hospitals combine purchased insurance and self-insurance. Individual copies of the complete report (GAO/HRD-86-112) are available at no charge from the U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, Maryland 20877. (*Professional Liability Update*, October 1986)

OFF-SHORE INSURERS WATCHED

Two off-shore insurers, said to be offering physicians professional liability protection at premiums 50 percent lower than those being sold by licensed carriers, have been barred from doing business in Illinois. The off-shore companies allegedly failed to pay large judgments against their insureds. The captives are being closely investigated by regulators in other states.

International Bahamian Insurance Company, Ltd. (IBI) and its affiliate, Professional Risk Insurers Management Exclusive Company, Ltd. (PRIME), agreed not to sell policies to Illinois after the state unsuccessfully tried to close down its Chicago-based operation, which consists of a post office box and a telephone number.

Physicians hear of the coverage through direct mail solicitations and in advertisements, but when they call the Chicago number, they are switched to a tie-line in Toronto, Canada. Mail going to the post office box is picked up by a courier who forwards it to another address. "The companies promise about a 30 to 50 percent lower than average premium," says Tim Cena, legal counsel for the Illinois Department of Insurance.

The state has solicited the help of postal officials in attempts to close down the post office box, but postal authorities said that even though the insurers are not licensed to do business in the state, that fact does not prevent them from having a box. Illinois regulators met with an attorney hired by IBI and PRIME and it was agreed that since the insurer is not licensed in Illinois, it would not sell policies in the state.

The Illinois insurance department said it knew of no physicians experiencing problems with the companies but that it moved to shut down the Illinois operations because it had no way to determine their financial conditions. Spokesmen for the department said that the state did not want its hands tied for lack of information when it came time to enforce state insurance codes.

"We had no safety net and we have heard from regulators in other states that the companies have walked away from large judgments," said Cena. He points out, however, that Illinois insurance code recognizes the IBI and PRIME policy as bona fide insurance contracts even though the companies are not licensed by the state.

"Physicians who have coverage are insured, but they might have a problem if the company refuses to pay a claim because there is little that we can do," he said.

"We've received calls from California, West Virginia, Colorado, Washington, Nevada, Michigan, Maryland, and New York—you name it," he said, estimating that his department has received as many as 50 inquiries just in the last few months. He said he knows of no state in which the two companies are licensed to sell insurance.

Colorado authorities told Cena the companies were "nowhere to be found" when one of their insured physicians had a $300,000 judgment filed against him. Apparently, PRIME refuses to pay malpractice judgments by citing a provision in the contract that requires defendants to initiate their own appeal before any award will be paid.

The Medical Society of the State of New York is in the process of issuing a warning to its members about PRIME and IBI after some members notified the physician-sponsored company, Medical Liability Mutual Insurance Company (MLMIC) that they were canceling their coverage to go with PRIME.

MLMIC Vice-President John Aversa said he warned the physicians about the reputation of PRIME and IBI and encouraged them to try to get in touch with a representative of the company before canceling their MLMIC coverage. "This is a dangerous organization because you cannot get your hands on these people," he said, adding that the physicians in question decided not to cancel their coverage with MLMIC.

Apparently PRIME and IBI have been around for some time. The Maryland Department of Licensing and Regulation issued a warning last December to physicians informing them that "the companies have not paid a single claim since being in operation," according to John Riggle of that department's enforcement section. Riggle said he has not heard any complaints about the company since that warning was issued. (*Medical Liability Monitor*, Vol. 11, No. 12, December 18, 1986)

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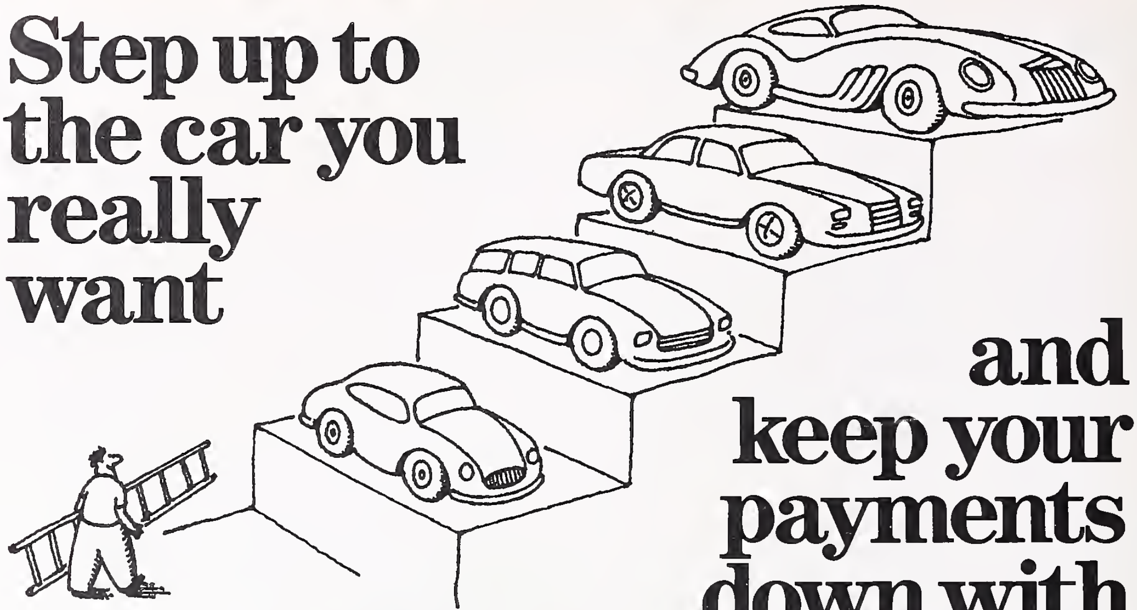

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INFLUENZA EPIDEMIC

Popular Reaction In Camden 1918-1919

William J. Snape, M.D., and Edward L. Wolfe, Ph.D., Haddonfield*

Another enemy, the flu, retreats. Photo Credit: *Evening Ledger*, October 26, 1918.

It is the unpredicted that is heeded and the unexpected that is noteworthy. The very infrequency of pandemics as well as their deadly consequences mark them for study. This is true of the influenza pandemic of 1918 to 1919 and especially true of its occurrence in Camden. There remains much uncertainty regarding the estimates for total mortality from the pandemic, and calculations vary from 20,000,000 to almost 40,000,000.[1] This particular strain of influenza, besides the usual distinguishing signs and symptoms of the disease, had other unusual features, such as infecting predominantly young adults from 20 to 40 years of age, and a tendency to produce pneumonia with frequent lethal consequences.[2] In some respects, this was the most deadly epidemic in the history of medicine. The United States as a whole, according to estimates of the U.S. Bureau of the Census, suffered 548,452 deaths;[2] the incidence in Camden with a population of 110,000 was proportionately virulent, nearly 1,400 people succumbing. This constituted the highest death rate (1,269 per 100,000 population) in the United States.[3] These statistics, however, do not indicate the reactions of the people to the peculiar adversities from which they suffered, nor did they hint at the resourcefulness and resiliency with which they responded to their calamitous experiences. Indeed, the reactions of the people, their cooperation, amity, and mutual support, were almost as uncommon as the pandemic itself.

The historical records of earlier pandemics and even the contemporary response to the growing threat of AIDS suggest that general panic and a general collaspe of moral values are the likely responses to lethal epidemics. During the major pandemics in the past, the principle of self-preservation was swept away, along with compassion, sympathy, loyalty, and other similar human virtues. The sick were unattended; the young abandoned the old; children forsook their parents; spouses deserted their mates of 20 or more years; clergymen ran away from parishioners to escape the disease; the dead were left unburied; and sullen profitmaking was rampant.

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*This paper was delivered at the Seventh Annual Meeting of the Medical History Society of New Jersey. Correspondence may be addressed to Dr. Snape, 261 Moore Lane, Haddonfield, NJ 08033.

This desolation was essentially the response to the Justinian plague of the 6th century, the Black Death that swept much of the world in the 14th century,[3] and to the epidemic of yellow fever in Philadelphia in 1793.[4] These three great epidemics were characterized by severe panic, widespread desolation, and a marked deterioration of the respect for moral values. Referring to the behavior that was produced by the Black Death (1347 to 1350), Gui de Chauliac, surgeon to Pope Clement VI at Avignon during the plague, wrote: "Such was contagiousness especially when there was spitting of blood that not only by remaining with but merely by gazing upon the sick one took the disease so that they died without attendants and were buried without priests. A father would not visit his son or a son his father: charity was dead and hope prostrate."[5]

J.H. Powell, author of a history of the great yellow fever epidemic of Philadelphia, warned his readers not to read the book before eating or in the midst of a sleepless night.[4]

In recent days, we have read in the press and seen on television impassioned males in the street demanding of doctors, legislators, and the world a cure for AIDS and angrily demanding some prevention for the disease.[6] We also have seen fear-ridden and furious parents demanding that children with AIDS be excluded from school regardless of the medical facts.[6]

But before we contrast the response of the Camden citizenry in the 1918 to 1919 influenza pandemic to the popular response to these epidemics, we must explain briefly the circumstances of Camden's experience. The two local daily newspapers provided detailed, independent, and sometimes slightly conflicting accounts of the nonmedical consequences of the epidemic.

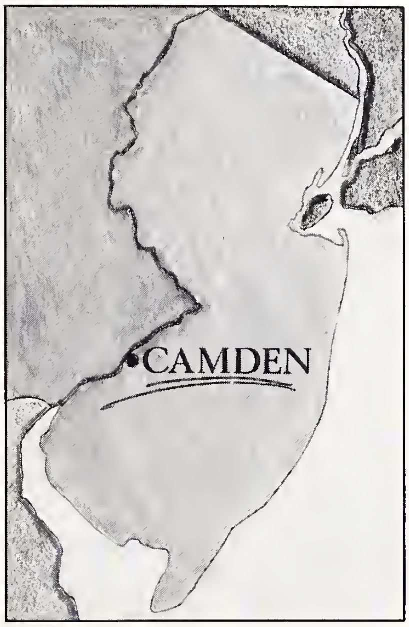
The inherent dispersive characteristic of influenza was inadvertently enhanced by the crowding of workmen, particularly in the shipyards, which had been expanded even before the outbreak of hostilities in World War I and long before the epidemic itself. The proximity to Camp Dix (Fort Dix), a training facility capable of accommodating 70,000 recruits from all parts of the country, not only influenced the onset of the epidemic in Camden, but also placed the city in an unfavorable competitive position with the federal government for drugs, burial caskets, and other needed supplies and assistance. The most serious deficiencies, also aggravated by the war, were the shortages of nurses, physicians, and funeral attendants. Moreover, there were the fundamental dislocations of normal living not precipitated by the war but by the epidemic. The stresses resulting from the suppression of public meetings, restriction of food, fuel, and alcoholic beverages, the unattended sick, and the unburied dead tested the spirit of the community.

Several circumstances placed Camden at particular risk of experiencing the fury of such a lethal epidemic. This epidemic found its victims largely, but not exclusively, among young adults—the group that is most important in times of war.[2] Camden's industrial growth up to this time in the 20th century had been phenomenal and had attracted many workers. These newcomers, often from rural areas, were not only from all parts of the nation but also from Europe, chiefly from rural Italy and Poland, and thus they had less immunity. The population growth was further accelerated by the expansion of the shipyards and the conversion of several plants to wartime industry. Influenza is spread from person to person by droplets or respiratory secretions and the incidence of the disease is increased by crowding. The sudden growth of the population found the city unable to supply sufficient housing, transportation, and other government-sponsored facilities and services. The lack of such facilities and services contributed to both the spread and the severity of the disease.[7] Undoubtedly, the frequent visits between the civilian population and the infected military personnel at Camp Dix assured an explosive spread of the virus. Camden was less than ten miles from Camp Dix, even in 1918 only a short trip.

The nation surprisingly had little warning of the impending epidemic. Camden's first indication was September 12th: the *Camden Post Telegram* noted that there was influenza on the east coast, brought there, it was believed, by returning troop transports. The symptoms were discussed in the article, but the virulence was minimized or misunderstood.[8] Five days later, the same paper published a press release by the Surgeon General, Dr. Blue, confirming the epidemic's presence. Dr. Blue made a few therapeutic suggestions. He recommended that patients should consult a doctor, go to bed, and eat plenty of food and fluids. He recommended quinine, aspirin, and Dover's Powders.[8] On September 19th, the *Camden Daily Courier* reported that 1,500 recruits were stricken at Camp Dix, but the seriousness of the disease again was minimized.[9] Two days later 42 soldiers were dead and the severity of the illness became more apparent. On September 28th, the *Camden Daily Courier* reported 72 more deaths at Camp Dix and the first death in Camden, a William Bowers. The paper further estimated 800 people were sick with influenza; 250 of them worked at the New York Ship Yard.[9] A Marine detachment at the immigration station was overwhelmed. Dr. Davis, the president of the Camden Board of Health, announced a deadly epidemic was loose in the city and that a quarantine would be imposed if the situation worsened.[9] The next day, 50 teachers and 2,500 students were absent, effectively closing the schools.[8] On October 2, Dr. Davis closed the churches, moving-picture houses, and theaters. Public meetings and assemblages were banned.[9] Initially, the saloons were not closed, but crowds from Philadelphia, where the saloons had been closed, became a nuisance. It was more a police measure than a medical action, but the saloons were closed.[8] Belatedly, on October 2, the State Board of Health added influenza to the list of reportable diseases.

At the same time, not satisfied with requiring the reporting of the disease, the state health authorities demanded an accounting for the past hectic week. This was impossible. The physicians were laboring long hours both in the office and on house calls. Many caught only cat-naps while sitting up dressed in their street clothes.[9] Furthermore, many early cases that were seen by physicians were not reported. Those who recovered or died without medical attention also were among the uncounted. Many physicians became ill with the prevailing illness; some died. At one time, one-half of practicing physicians in Gloucester were either sick in bed or had died.

Perhaps the most stressful manifestation of the siege was the inadequacy of supplies and personnel. The pharmacists were overworked. Shortages of glass medicine bottles and milk bottles became acute, early in the epidemic. Actually at one time all appropriate drugs to treat the symptoms of influenza were exhausted in Gloucester. During the first week, the Camden undertakers were unable to obtain caskets. This initially was caused by the federal government's appropriation for Camp Dix of the entire output of the Philadelphia manufacturers. Makeshift coffins were constructed of pine boards in the basement of the emergency hospitals and in several firehouses in Camden. Grave diggers, unfortunately, were unobtainable, the few remaining were sick or overworked, and the rest were in defense jobs. Male relatives, after work and on weekends, dug graves for their dead. At one time, 30 convicts from the county jail dug graves while under armed guards.[8] Later, mechanical ditch diggers were employed. Unfortunately, this made the marking of graves very difficult. Even today, elderly people of the area are disturbed by the inability to locate their families' graves.[10] Cemetery records often are jumbled for this period.



Embalmers were also at a premium, particularly after the complications of influenza began to take an even bigger toll. The unembalmed corpse in a pine box resting on a porch of a row house for several days was a definite health hazard. The Board of Trade eventually formed a committee to restore some order and helped the surviving families preserve the corpse and bury the dead.

During the first week, two unsuccessful plans were suggested in an effort to relieve the pharmacists and physicians. It was suggested a committee develop a formulary to treat the prevailing illness. These preparations were to be made in large lots, bottled and distributed to the individual drug stores, and then labeled and dispensed. This plan had many obvious difficulties and was never implemented. The second plan was to divide the city into sectors, roughly the wards, and assign physicians to each district. The physicians were to practice only within these assigned areas. This pleased neither the physicians nor the patients.[9]

A plan, suggested by one of the newspapers, to distribute medical care did succeed. It was suggested that large meeting rooms of several social lodges be used to care for the unattended bedridden sick. Nurses and physicians, under such conditions, could care for many more patients and care for them more efficiently.[9] A meeting was called in Camden of interested citizens on the morning of October 6th, and several sites for hospitals were visited. It was decided to take over Battery B Armory as an ideal hospital. The Commandant was agreeable.[9] Later in the morning, there was a meeting of this group with the mayor and his associates who arranged financing. That afternoon trucks made repeated trips to the warehouses of department stores—providing beds and furnishings. Dr. T.B. Lee organized a medical staff. Miss Mary Rockhill was given the responsibility of organizing a staff of registered nurses. The Red Cross organized the volunteers who appeared that afternoon in large numbers. The volunteer staff consisted of men and women from all walks of life; from factories, offices, convents, households, and schools. After a grueling day, early that evening of October 6th the first patients were admitted.[11]

The facility worked so efficiently that the following week a program of home-care was begun. Nurses carried out the more sophisticated treatments and taught the women in the homes basic nursing care.[11] Several nurses made 20 house calls per day. These visits into the homes were at times grim experiences for these women. Mothers were sometimes found dead in the same bed with a surviving child.

Although the severity of the epidemic in Camden is well documented, there is no evidence of general panic, no record of a collapse of moral values, and no evidence of a widespread repudiation of human virtues. No deterioration of human conduct was observed in this epidemic. This absence of panic and desolation has been specifically noted by at least three writers. Dr. Davidson of Cedar Grove, New Jersey, wrote, "And yet this pandemic caused practically no panic. It inspired no poetry, no art. It never developed a mythology."[12] Geddes Smith noted, "Yet we are struck by the absence, in 1918, of the degree of panic and desolation which is reported in comparable waves of death in earlier years."[13] Walters echoed these opinions.[14]

These three authors ascribe this cool, cooperative spirit to the co-existing war. They believed the people were distracted by the carnage of war and tended to accept death from influenza with poise. Since the war killed 52,000 U.S. soldiers and sailors and influenza ten times this number, it seems to be an unconvincing conclusion.

Today, we are aware of the panic of certain people faced with just the probable beginning of an epidemic of AIDS. Our culture has not handled the threat of AIDS with either dignity or discretion.

The reason for the absence of panic or the absence of a collaspe of moral values during the 1918 influenza epidemic actually is unknown. It may have been a result of the propaganda and restraint associated with the war effort. Several times it was rumored that the Germans had surreptitiously seeded the country with influenza germs. Thus the epidemic became at least a part of the war effort. The newspapers had described the compassionate volunteers as "good soldiers," therefore coping with the epidemic became a patriotic duty. The first press release in September of the president of the Board of Health, who was nominally in charge of controlling the epidemic, indicated it was a patriotic duty to avoid contracting influenza.[9]

The compilers of a report of the *Pandemic of Influenza 1918-1919*, for the Ministry of Health of Great Britain, surveyed the characteristics of the pestilence in Europe, Western Hemisphere, Australia, Asia, and Africa. A review of this compilation reveals only two instances of noteworthy loss of composure in the numerous epidemic sites reported—Stockholm, Sweden, and Rio de Janeiro, Brazil. In both instances, the panic was instigated by an irresponsible press.

In Stockholm, after the circulation of an unfounded rumor that the epidemic of 1918 was actually pneumonic plague, a deadly disease, and a drastic shortage of food and the exhaustion of drug supplies without the possibilities of replenishment, the morale of the populace became badly shattered.

Rio de Janeiro experienced a more severe panic. At the onset of the epidemic, the authorities announced it was a very mild outbreak, but when the number of deaths began to mount, panic ensued. "The sanitary administration broke down, business was at a standstill, the food supplies ran short, and what articles were available were sold at such exorbitant prices as to place them out of the reach of the poorer classes. Many shops were closed and the streets were almost deserted. Restaurants and places of amusement also closed their doors ... the railway services were greatly reduced; communication by telegraph and telephone was almost suspended. At some of the public relief stations no medical stores were available and medical assistance could not be obtained. The druggists raised their prices enormously, making such drugs as quinine quite unobtainable by the lower classes. Some of the newspapers added to the panic by printing alarming accounts of the ravages of the epidemic and attacked with bitterness the sanitary authorities of the city. ... Many corpses could not obtain burial, at more than one cemetery over 100 coffins were lying awaiting burial."[5]

Compared with this "panic and desolation" Camden was an example of composure and social responsibility. Although the reason for such composure and responsibility is uncertain, numerous factors surely contributed to both. The influenza epidemic was of short duration. The recurrent plague epidemics were months and years in span, and even the yellow fever epidemic lasted four months. Profiteering was a causative factor in Brazil. In Camden, only one physician was found to be culpable; he made restitution and was dismissed with a warning by the prosecutor. Several complaints against funeral directors were investigated by the prosecutor and found to be without merit. Because of the war, food was tightly rationed and prices fixed, therefore profiteering was more difficult. Legally, saloons were closed, so any profiteering from the sale of whiskey for medical purposes would have been a serious offense. Another factor that supported the sense of community was the close and cooperative relationship between the local press, the civil authorities, and the people. The editors were mature and behaved intelligently. The facts were explicated carefully without dramatic effects. Two days before the lifting of the quarantine on October 23rd, the *Camden Daily Courier* editor wrote, "All in all Camdenites should feel that out of the accompanying gloom that has necessarily followed in the wake of the epidemic, there has been a glorious recognition that we have in our midst a splendid spirit of cooperation. It makes one feel proud of his mature city and revives faith in humanity."[9] And even today, we can say, somewhat wistfully, true, true cooperation and a faith in humanity rose above the easy and often disappointing immediate acts of self-preservation.

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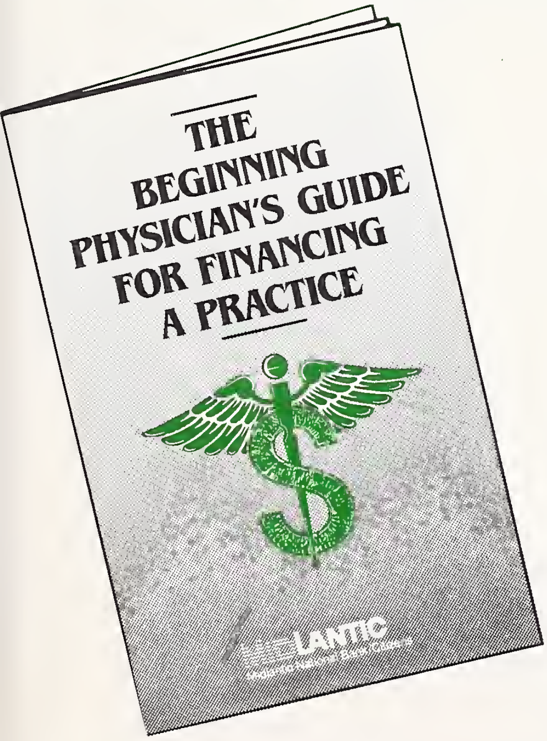
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PSEUDOFRACTURE OF DUAL CHAMBER PACEMAKER LEAD: AVOIDANCE OF SURGICAL INTERVENTION

STEPHEN M. AUSTIN, M.D. EAST ORANGE*

I present a case of radiographic pseudofracture of the ventricular lead of a "committed" DVI pacemaker. Surgical revision was avoided by correct interpretation of the unique electrocardiographic pacemaker patterns. Use of the manufacturer's anchoring sleeve will obviate pseudofracture caused by suture-related insulation compression.

Pseudofracture of a transvenous pacemaker electrode, an infrequently reported benign radiographic observation, is caused by compression of the electrode insulation by tightly applied anchoring sutures.[1-4] In order to obviate unnecessary surgical intervention, pseudofractures must be distinguished from true lead fractures, which have been reported in 2.7 to 3.9 percent of transvenous electrodes on long-term followup and require operative revision or replacement.[5,6] We treated a patient with a pseudofracture of the urethane ventricular lead of a "committed" DVI pacemaker.

CASE REPORT

A 38-year old man with a dual chamber pacemaker was transferred to the East Orange Veterans Administration Medical Center on June 25, 1985, for surgical revision of a suspected fracture of the ventricular lead observed on chest roentgenogram. He had been admitted to the coronary care unit of a local community hospital because of an episode of lightheadedness and visual blurring with diplopia. Pacemaker stimuli with apparent failure of ventricular capture were seen on electrocardiographic rhythm strips.

An Intermedics 259-01 "committed" DVI pacemaker had been implanted on July 29, 1980, at another hospital because of sinus bradycardia with lightheadedness and recurrent syncopal episodes. Medtronic transvenous unipolar urethane 6971 ventricular and 6991 atrial endocardial leads were inserted from the left subclavian vein using a Littleford-Spector introducing sheath. Unipolar thresholds at implantation were 0.3 volt and 0.3mA for the ventricular lead, and 0.5 volt and 0.5mA for the atrial lead. Following insertion of his pacemaker, he had been asymptomatic until the episode prompting his present hospitalization.

Chest roentgenogram on admission (Figure 1) showed a radiolucent disruption in the ventricular lead about 3 cm below the left clavicle, suggestive of a lead fracture. On close inspection, however, the defect appeared to be in the insulation, and the helical coil of the lead was intact. Initial electrocardiographic tracings (Figure 2, DVI) showed normal atrial capture followed by an appropriate AV delay of about 150 msec and ventricular pacemaker stimuli occurring within spontaneously conducted narrow QRS complexes superficially giving the appearance of failure of ventricular capture. Ventricular sensing was normal. With slowing of intrinsic AV nodal conduction by carotid sinus massage, appropriate ventricular capture by the pacemaker was demonstrated (Figure 2, CSM). Additionally, with temporary reprogramming of the

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*Dr. Austin is affiliated with the Cardiology Section, Medical Service, East Orange Veterans Administration Medical Center, and UMDNJ-New Jersey Medical School, Newark. Correspondence may be addressed to Dr. Austin, East Orange VA Medical Center, East Orange, NJ 07019.

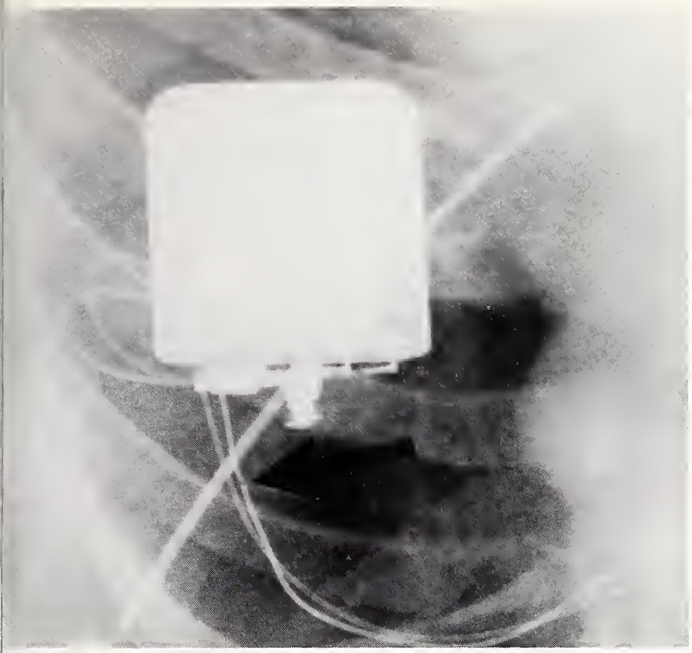

Figure 1—Posteroanterior chest roentgenogram showing apparent ventricular lead disruption, with a radiolucent defect seen about 3 cm below the left clavicle (arrow).

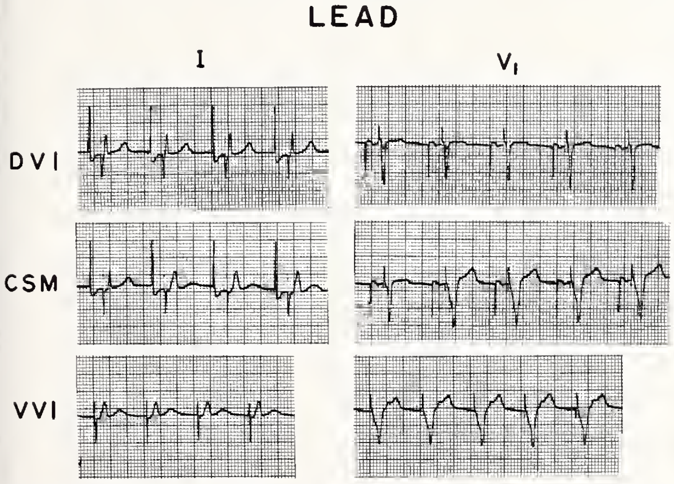

Figure 2—Upper panel shows lead I and V_1 electrocardiographic rhythm strips in the committed AV sequential demand mode (DVI), with ventricular pacemaker stimuli occurring at the beginning of spontaneously conducted supraventricular QRS complexes, giving the appearance of noncapture. Middle panel during carotid sinus massage (CSM) shows transient emergence of ventricular paced beats as a result of slowing of intrinsic AV nodal conduction. Bottom panel recorded during reprogramming to a ventricular inhibited demand mode (VVI) shows consistent ventricular capture by pacemaker stimuli.

pacemaker to a VVI mode and increasing the paced rate to 96 beats/min, complete ventricular capture was present, indicative of normal ventricular electrode function (Figure 2, VVI). No loss of capture occurred on manipulation of the pacemaker generator in the pocket. Subsequently, a 24-hour Holter continuous electrocardiographic recording showed sinus rhythm with intermittent pacemaker activity with normal pacing and sensing function of the "committed" DVI pacemaker at the programmed rate of 60 beats per minute. Both telephonic pacemaker monitoring three months after discharge and a 12-lead electrocardiogram also showed normal DVI pacemaker function.

DISCUSSION

The Intermedics 259-01 "committed" DVI pacemaker is designed electronically so that each atrial stimulus is followed by an obligatory ventricular pacing stimulus after an atrioventricular delay of 155 msec. Ventricular events are sensed and initiate or inhibit an atrial pacing response. Because each ventricular pacing stimulus is irrevocably linked to the immediately preceding atrial stimulus, either fully ventricular paced beats, fusion beats, or ventricular stimuli falling within spontaneously conducted supraventricular QRS complexes may occur, depending upon the patient's intrinsic AV conduction time.[7,8] In the present case, the occurrence of ventricular stimuli at the beginning of spontaneously conducted supraventricular QRS complexes erroneously gave the appearance of failure of ventricular capture (Figure 2, DVI), which is part of the spectrum of "pseudomalfunction" of dual chamber pacemakers.[9] The use of carotid sinus massage in our patient produced slowing of both sinus rate and AV nodal conduction, which permitted ventricular paced beats to emerge transiently (Figure 2, CSM). Furthermore, temporary reprogramming of the unit to a VVI mode at a higher rate demonstrated complete ventricular capture (Figure 2, VVI). Subsequent 24-hour Holter electrocardiography and telephonic monitoring also showed normal DVI pacemaker sensing and pacing function. Additional findings seen in true ventricular lead fractures, not present in our patient, include either complete absence of pacemaker stimuli or intermittent absence of stimuli with variation of stimulus amplitude, depending upon the degree of contact of the fractured ends.[10]

Thus, the radiographic observation of an apparent break in the integrity of the ventricular lead in this case represents a pseudofracture rather than a true fracture, caused by compression of the urethane insulation of the Medtronic 6971 lead by a retaining suture.[4] The correct recognition of the electrocardiographic patterns of the Intermedics 259-01 "committed" DVI pacemaker was instrumental in distinguishing a pseudofracture from a real break in the ventricular lead, and avoided an unnecessary surgical procedure for lead revision or replacement. Because radiographic pseudofracture is due to compression of the electrode insulation by tightly applied retaining sutures at implantation, the situation may be avoided by using the silicone anchoring sleeve supplied by the manufacturer rather than placing the sutures directly around the lead. The use of the anchoring sleeve also will prevent the occurrence of actual suture-induced damage to the insulation.[11]

SUMMARY

A case of radiographic pseudofracture of the ventricular lead of a "committed" DVI pacemaker is presented; however, the correct interpretation of the electrocardiographic patterns unique to this pacemaker design avoided unnecessary surgical intervention. Both the application of carotid sinus massage to prolong the patient's AV nodal conduction and temporary reprogramming of the pacemaker to a VVI mode eliminated ventricular stimuli occurring within spontaneously conducted QRS complexes and demonstrated consistent ventricular capture. Subsequent 24-hour Holter electrocardiography and telephonic monitoring also demonstrated normal DV pacemaker sensing and pacing function. Since the radiographic appearance of pseudofracture is caused by compression of the lead insulation by tightly applied retaining sutures, the use of the anchoring sleeve supplied by the manufacturer will avoid the situation as well as prevent potential insulation damage.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

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DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

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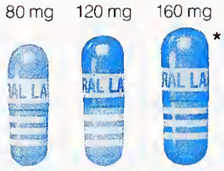

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia a surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-rec tor agonists and its effects can be reversed by administration of such agents, e.g., dobutam or isoproterenol. However, such patients may be subject to protracted severe hypotensi Difficulty in starting and maintaining the heartbeat has also been reported with beta blocke

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearar of certain premonitory signs and symptoms (pulse rate and pressure changes) of ac hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficu adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidis Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of sympto of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function te

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have be reported in which, after propranolol, the tachycardia was replaced by a severe bradycar requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impai hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatmen hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients sho be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead t return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disea elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as res pine should be closely observed if INDERAL is administered. The added catecholami blocking action may produce an excessive reduction of resting sympathetic nervous acti which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthost hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals h been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studie both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of sig cant drug-induced toxicity. There were no drug-related tumorigenic effects at any of dosage levels. Reproductive studies in animals did not show any impairment of fertility that attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in ani studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised w INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have ra required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypot sion; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of Raynaud type.

Central Nervous System: lightheadedne mental depression manifested by insom lassitude, weakness, fatigue; reversible me depression progressing to catatonia; vis disturbances; hallucinations; an acute reve ible syndrome characterized by disorientat for time and place, short-term memory lo emotional lability, slightly clouded sensori and decreased performance on neuropsyc metrics.

Gastrointestinal: nausea, vomiting, epig tric distress, abdominal cramping, diarrh constipation, mesenteric arterial thrombo ischemic colitis.

Allergic: pharyngitis and agranulocyto erythematous rash, fever combined with aching and sore throat, laryngospasm and respirat distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpu

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been ported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impoten and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involvi the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride i sustained-release capsule for administration once daily. If patients are switched from INDER tablets to INDERAL LA capsules, care should be taken to assure that the desired therape effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration m be necessary especially to maintain effectiveness at the end of the 24-hour dosing interva

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may increased to 120 mg once daily or higher until adequate blood-pressure control is achiev The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of mg may be required. The time needed for full hypertensive response to a given dosag variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL once daily, dosage should be gradually increased at three to seven day intervals until optim response is obtained. Although individual patients may respond at any dosage level, average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value a safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL once daily. The usual effective dose range is 160-240 mg once daily. The dosage may increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is obtained within four to six weeks after reaching the maximum dose, INDERAL LA thera should be discontinued. It may be advisable to withdraw the drug gradually over a perio several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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POSTERIOR FOSSA MENINGIOMAS

OTAKAR R. HUBSCHMANN, M.D., AND ABBOTT J. KRIEGER, M.D., NEWARK*

Patients with persistent vague headaches localized to the posterior fossa should be considered suspects for posterior fossa meningioma. Experienced neurosurgeons in appropriate clinical centers usually can resect the tumors completely with no mortality and little or no additional morbidity.

Recent advances in radiodiagnostic procedures that include sophisticated CT scanning techniques and magnetic resonance imaging (MRI) have made a great impact on diagnosis and treatment of most neurological disorders. These diagnostic advances, paralleled by similar advances in neurosurgical techniques and neuroanesthesia, are reflected in significantly decreased mortality and morbidity in patients undergoing neurosurgical procedures. The latter, in turn, influenced treatment philosophies, particularly in certain types of brain tumors. The availability of ultrasonic aspirators and the use of laser have made possible the complete resection of certain tumors which were considered either totally inoperable or limited to biopsy only. Among these lesions are posterior fossa meningiomas, which often present clinically in an unusual fashion and pose a diagnostic problem to the primary physician.

We have reviewed our experience with posterior fossa meningiomas in order to highlight the salient clinical features and to discuss the technological improvements that enable us to establish the diagnosis early and to remove these tumors much more safely than was possible in the past.[1-3]

MATERIALS AND METHODS

The Table summarizes the age, sex, location, and extent of the surgical removal of 11 tumors in the posterior fossa. All patients were followed by neurologists pre- and postoperatively. All patients had one or more CT scans and most had preoperative angiogram. Every patient either had direct or reformated coronal and sagittal images to provide precise tumor location and its relationship to normal anatomical structures. Extra-thin images always were performed with contrast enhancement to reveal the relationship of the tumor to important vessels. When MRI became available, it also was obtained when possible.

RESULTS

There were no operative mortalities in this series. One patient had a decompression of foramen magnum and biopsy only. One patient had a malignant meningioma. Two attempts at a complete removal of a large clival tumor, first infratentorially and then supratentorially, were unsuccessful. Each time, only part of the tumor was removed; the patient died 14 months after the second surgery from tumor recurrence and brain stem compression, although he was neurologically functional until the last month of his life.

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*Drs. Hubschmann and Krieger are affiliated with the Section of Neurological Surgery, Veterans Administration Medical Center, East Orange, and UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. Hubschmann, Section of Neurological Surgery, H-592, 100 Bergen Street, Newark, NJ 07103.

TABLE

Posterior Fossa Meningiomas

Age	Sex	Location	Complete Resection	Subtotal Removal	Biopsy	Mortality	Morbidity
62	M	FM	+**	–	–	–	–
16	M	C	–	+	–	+*	+
56	M	PB	+	–	–	–	–
61	M	PB	+	–	–	–	–
48	F	PB	+	–	–	–	+
56	M	T-PB	+	–	–	–	+
70	F	FM	–	–	+	+*	–
58	M	T	+	–	–	–	–
56	F	C	+	–	–	–	–
52	M	T	+	–	–	–	–
42	F	T	+	–	–	–	–

FM—Foramen Magnum
T—Tentorial
PB—Petrous Bone
C—Clivus

*—Died one year after surgery
**—Intradural only

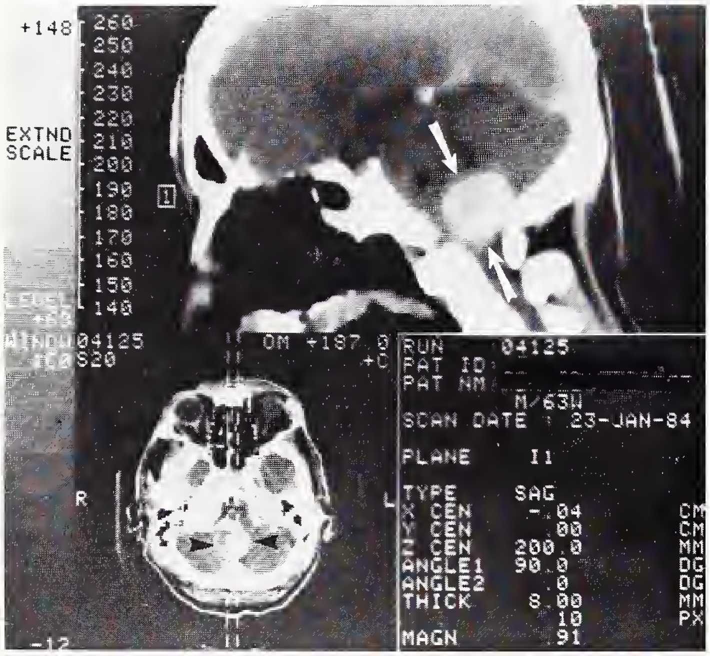

Figure 1—Sagittal reformated image reveals a large foramen magnum lesion (top). Routine axial cut through the foramen magnum (bottom).

Operative morbidity included one patient with a meningioma of the internal acoustic meatus in whom the facial nerve was initially saved but who had a recurrence at one year. This time, the facial nerve was resected together with the large dural tumor attachment. At a later date, a hypoglosal to facial nerve anastomosis was performed with good functional recovery of the facial musculature. One patient, with a large tentorial meningioma that involved cranial nerves V and VII, had a postoperative loss of function of these nerves. He refused hypoglosal to facial nerve anastomosis and was left with a permanent tarsorrhaphy and no facial function on the appropriate side. In two patients, a temporary partial tarsorrhaphy was performed to protect the cornea because of loss of eyelid blink. The rest of the patients did well and had either no neurological deficit or were left with their original neurological deficit.

CASE REPORT

Foramen Magnum Meningioma. A 67-year-old male complained of nonspecific, vague neck pains and slowly increasing difficulties walking. A neurologist found a paucity of objective findings and elected to observe the patient. Six months later, the patient had a mild quadriparesis. A routine CT scan, with and without contrast, was reported to be normal. A myelogram to the C2 level was performed and it too was reported as normal. Because of the negative diagnostic studies and increasing complaints from the patient, with little in the way of objective neurological findings, he was labeled a hysteric and treated for another ten months with various psychotropic medications. Only when he was unable to walk unaided was he readmitted to the hospital. This time the combination of quadriparesis and nystagmus suggested a foramen magnum lesion. A CT scan of the region with reformated images revealed a large foramen magnum tumor (Figure 1). Surgery was performed and the intracranial portion of the tumor was completely removed. A small extracranial portion of the tumor at the level of C1-2 which enveloped the vertebral artery was left in situ (Figure 2). His postoperative course was uneventful with a marked neurological improvement.

Clivus Meningioma. A 62-year-old female executive developed a transient hemiparesis that initially was thought to be due to a transient ischemic episode. The CT scan revealed a clivus tumor displacing the brain stem. The reformated images showed the exact location of the tumor and its relationship to the brain stem (Figure 3). At surgery, the tumor was completely removed (Figure 4). The postoperative recovery was uneventful and she had no neurological deficit. She returned to her occupation after three months.

Tentorial Meningioma. A 32-year-old female complained of moderate headaches and depression for approximately two months before she sought medical attention. When she was seen, however, the absence of clinical findings, depression, and only moderate headaches led to a diagnosis of depressive reaction and no

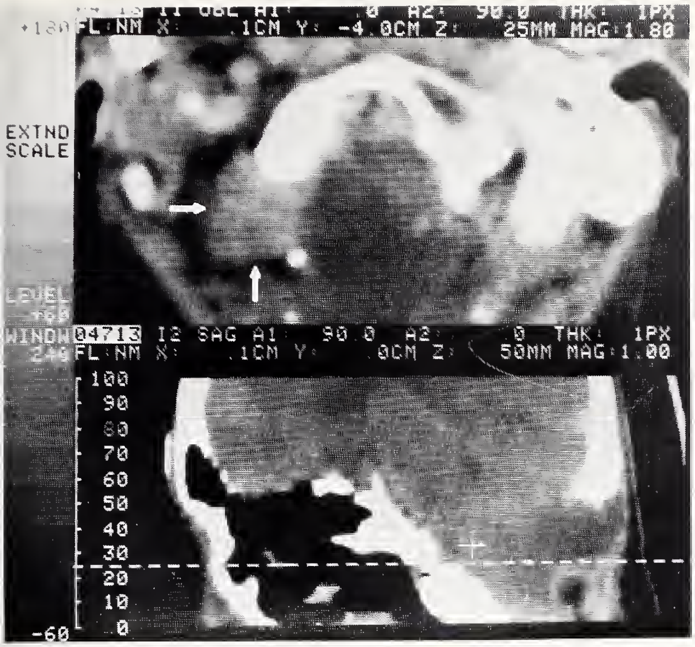
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Figure 2—Postoperative CT scan through the level of C1 shows a complete intradural tumor removal (top). A small portion of the tumor attached to the vertebral artery was left in situ. Postoperative reformated sagittal image shows a complete intradural tumor removal (bottom).

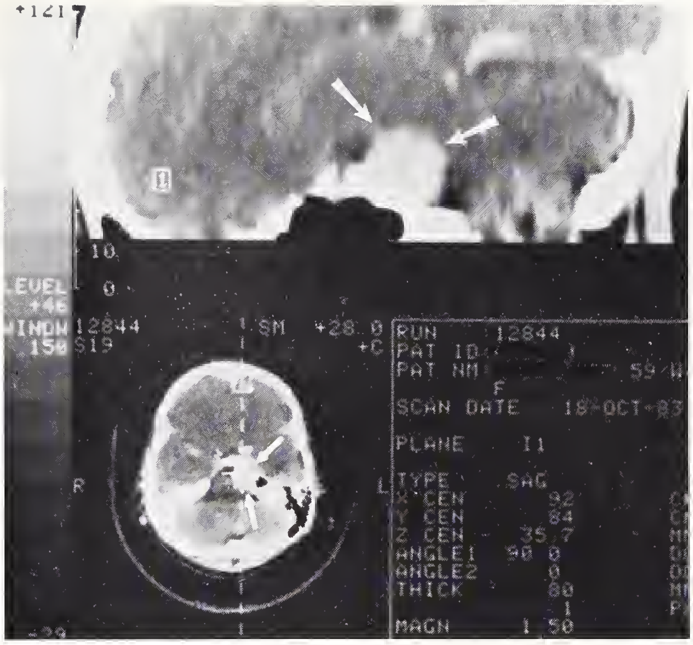

Figure 3—A reformated sagittal image shows a large clival tumor (arrow) compressing the brain stem posteriorly and superiorly (top). Axial images confirm the presence of the tumor and compression of the brain stem (bottom).

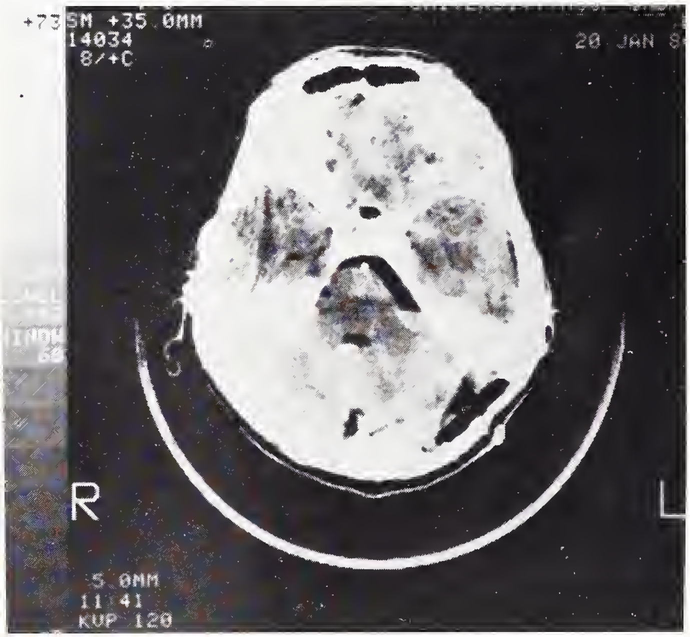

Figure 4—Postoperative CT shows a complete tumor removal. Postoperative intracranial air is noted.

further studies were performed. Two months later, she had severe headaches and an unsteady gait; funduscopic examination revealed a bilateral florid papilledema with extensive retinal hemorrhages. CT scan revealed a large infra- and supratentorial meningioma with hydrocephalus due to obstruction of the aqueduct (Figures 5 and 6). The cerebrospinal fluid was immediately shunted and one week later a complete removal of the tumor by a combined supra- and infratentorial resection was performed (Figure 7). She had no postoperative neurological deficit, was ambulatory within one week of surgery, and was discharged three weeks later. At the time of discharge, she was left with a decrease in vision and early optic atrophy due to the preoperative papilledema. One month later, a significant visual impairment and definitive optic atrophy persisted.

DISCUSSION

These illustrative case reports highlight both the diagnostic difficulties as well as the technical improvements that allow a complete extirpation of these tumors without producing a new neurological deficit.

Tumors in the posterior fossa produce different symptoms than those of the supratentorial region. The small compartment of the posterior fossa, confined below the tentorium and above the foramen magnum, contains neuronal centers responsible for the maintenance of blood pressure, respiration, heart rate, and other vital functions. All the cranial nerves originate in the posterior fossa with the exception of the olfactory and optic nerves. The cerebrospinal fluid (CSF) pathways in the posterior fossa easily can be compromised at several points where the CSF passes through naturally narrow passageways such as the aqueduct and perimesencephalic cisterns. These anatomical factors are responsible for a biphasic course of the disease. During the first phase, the slowly growing tumors may cause no specific symptoms except for nonspecific headaches, sometimes referred to the upper neck and back of the head. Given the large number of middle-aged and older persons suffering from cervical discogenic headaches, this symptom is not particularly useful in establishing the diagnosis. On the other hand, the development of cranial nerve palsies is a useful but late localizing sign because slowly growing meningiomas stretch and displace the cranial nerves without causing a deficit. Spasticity is a late sign that clinically cannot be distinguished from the more common cervical spondylosis compressing the spinal cord.

The transition into the second stage is more ominous and represents the development of compromise of the cerebrospinal fluid circulation. The headaches became much more severe and the patient may develop unsteadiness of gait from either direct compression of the cerebello-pontine connections or due to the stretching of the fronto-ponto-cerebellar fibers second-

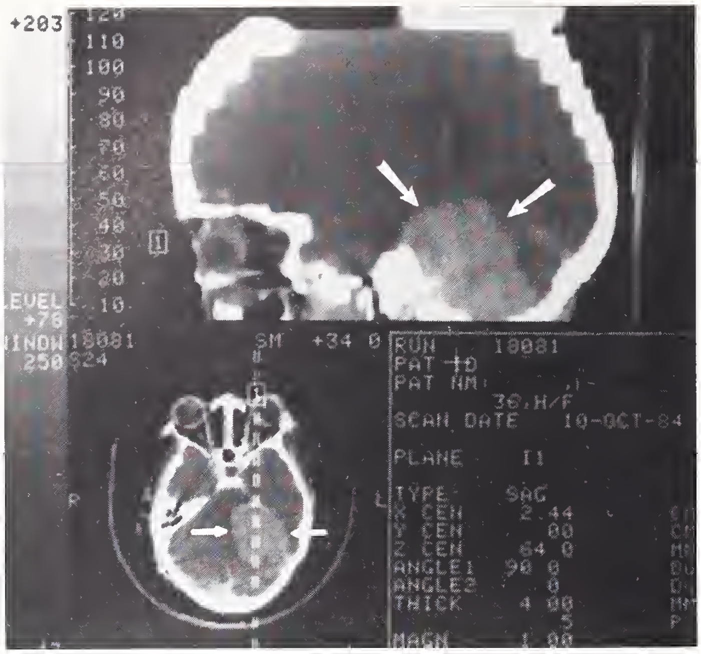

Figure 5—A large tumor extending through the tentorium. Sagittal reformating showing the supero-inferior extent (top). Axial view showing the mediolateral extent of the tumor at this level (bottom).

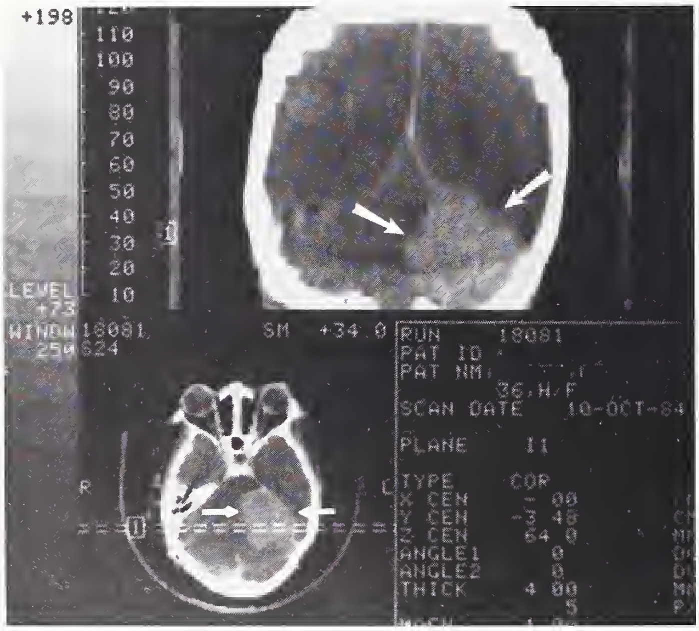

Figure 6—Coronal view delineates the medial portion of the tumor (top). Axial view of the tumor (bottom).

ary to hydrocephalus. This stage is very dangerous because a process that may have taken several years to develop accelerates at a dramatic rate. If not treated immediately, the massive increase in intracranial pressure may lead to a rapid loss of vision or even sudden death due to a cardiorespiratory dysfunction. Once papilledema and hemorrhages in the optic nerve develop, visual impairment may progress even after successful surgical management of the increased intracranial pressure (as was seen in case report 3). Other clinical signs such as depression are not readily associated with a posterior fossa tumor and are not part of its classical description. Significant depression, however, was seen in three of our patients. Diplopia, nystagmus, decreased hearing, or facial asymmetry were more common and were related to a specific cranial nerve dysfunction. A peculiar distribution of bilateral numbness and weakness of hand muscles has been described in patients who harbor a tumor at the foramen magnum.

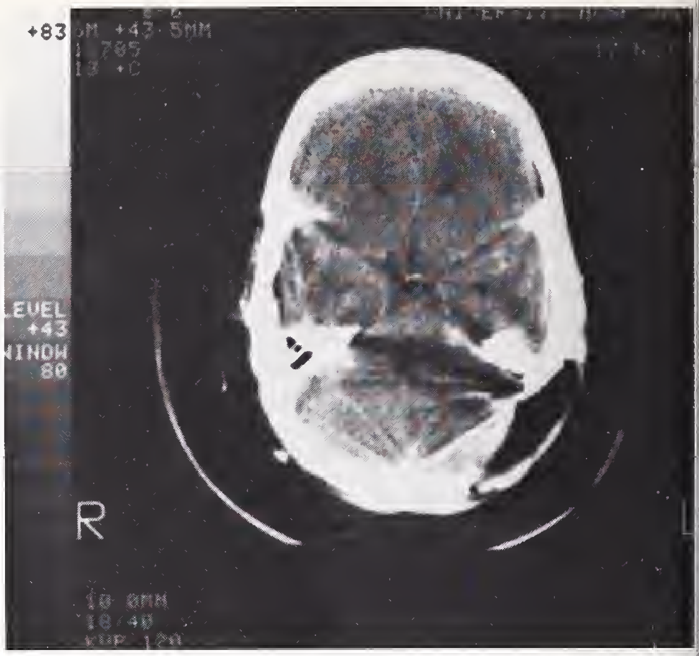

Figure 7—Postoperative CT scan shows a complete tumor removal. The tumor bed is filled with CSF (low density).

The paucity of clinical findings should not prevent the family physician or internist from proceeding with appropriate diagnostic studies. Presence of any of the specific signs or persistence of the nonspecific signs for more than two weeks indicate the need for a CT scan of the head with and without intravenous contrast. As some meningiomas enhance only with contrast, a tumor may be missed if it is too small to produce a significant mass effect on a noncontrast CT study. Recently, magnetic resonance imaging of the head has been used and appears to offer distinct advantages as a screening procedure. Its high cost and limited availability, however, make it less attractive Routine CT scanning may be adequate and less expensive. Once the diagnosis is suspected, a neurosurgeon should help with the selection of further studies. Coronal and sagittal reconstructions on the CT scan are essential in planning the appropriate surgical approach. The role of cerebral angiography has changed in recent years. It no longer serves as a diagnostic tool, but rather provides specific information to the surgeon about the position of major feeding vessels and the position and patency of the transverse and sigmoid sinuses. The MRI has not eliminated the need for contrast CT or cerebral angiogram in most instances.

The surgical techniques have undergone significant improvement in recent years. In addition to routine use of the surgical microscope, high performance power drills permit more extensive removal of bone which provides better exposure and minimizes the manipulation of neural structures. The use of specialized pin head holders allows precise positioning of the head based on the detailed preoperative diagnostic studies. Intraoperatively, the newest generation of bipolar coagulators allows pinpoint coagulation of the bleeding vessels. The resection of firm meningiomas is markedly facilitated by their aspiration after emulsification by the ultrasound instrument. This allows removal of even very large and firm tumors without undue traction on the surrounding structures which has been one of the main sources of mortality and morbidity in the past. Laser facilitates the surgery in poorly accessible locations. In this so-called "no touch technique," a defocused laser beam evaporates the exposed tumor from a distance through the open cranium and significantly decreases surgical manipulation of the brain.

New anesthetic techniques also have contributed to successful surgical results. The Swan-Ganz catheter placement preoperatively with computerized evaluation of cardiac function and intraoperative monitoring of cardiac output have been helpful in patients with significant intraoperative bleeding, common in meningiomas. These tumors occur in elderly patients with depressed cardiac function who are subjected to intravenous fluid volume loading and cardio-depressant anesthetic agents during surgery.

CONCLUSION

The results of the treatment of posterior fossa meningiomas have improved dramatically in the last ten years. None of our patients died as a result of surgery; tumor removal was incomplete in two. None of the patients suffered serious postoperative morbidity as a result of surgery. Better results can be expected in the future, providing the tumors are identified before they cause irreversible damage to the surrounding neural structures. These tumors, however, need to be handled in centers where experienced surgeons have access to the most modern diagnostic and treatment technologies.

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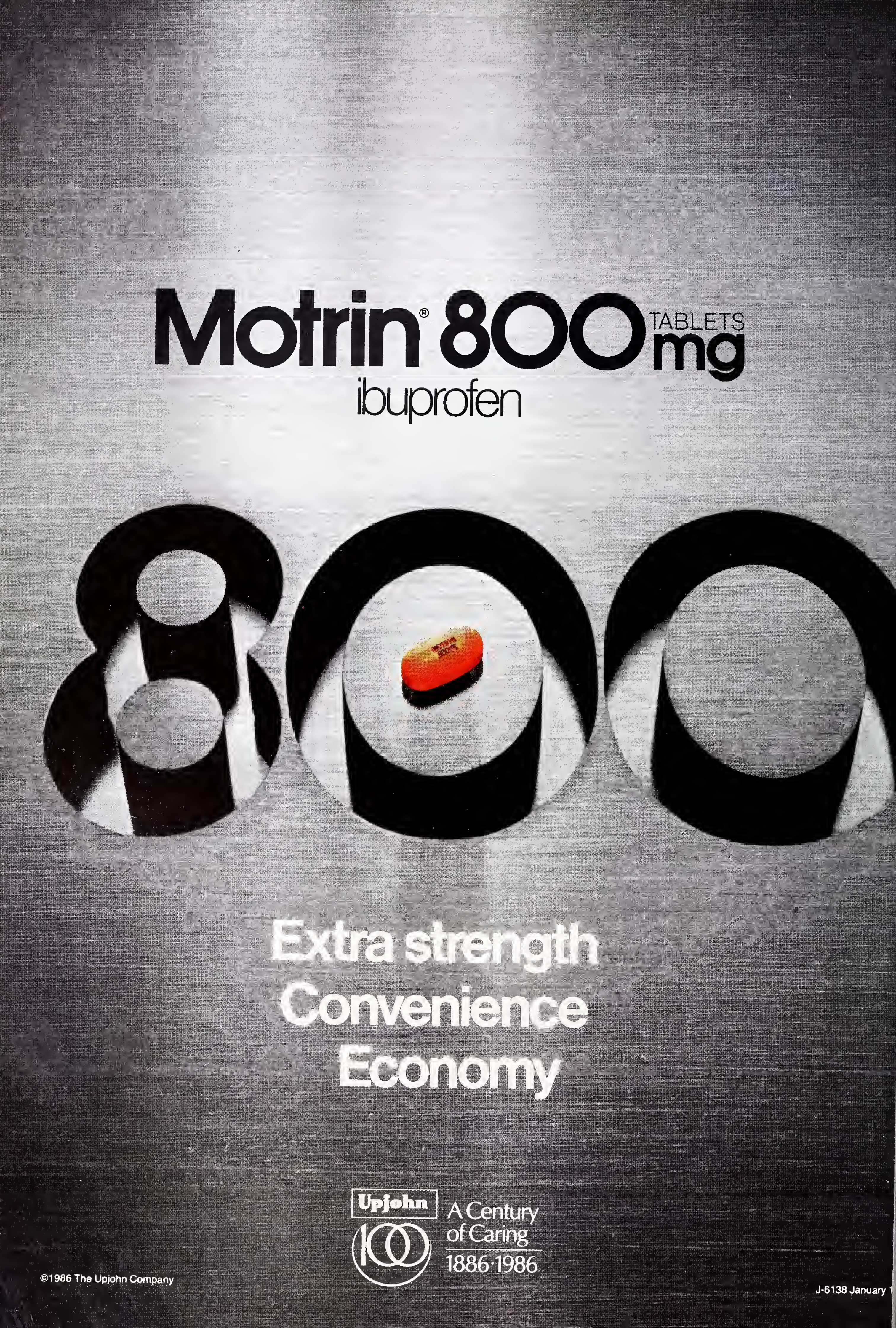

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TREATMENT OF ERECTILE FAILURE WITH INFLATABLE PROSTHESES: THREE-YEAR EXPERIENCE

DAVID C. SAYPOL, M.D., GEORGE M. UHRAN, M.D., JOHN C. STOCKMAN, M.D., MORRISTOWN*

In 1983, a new model of the Scott inflatable prosthesis for the treatment of erectile dysfunction was released. We describe the results of 42 successive implants performed over the past three years using the current prosthesis. Forty patients are using the prosthesis satisfactorily for a success rate of 95 percent.

Impotence, the inability to obtain an erection satisfactory for intercourse, can have devastating consequences on an estimated ten million men in this country. Until the early 1970s, successful therapy was not available.

As early as 1902, Wooten recommended ligation of the dorsal vein of the penis as a way to improve turgidity and thus restore erectile adequacy.[1] Thirty-four years later, attempts were made to implant rib cartilage within the penis in hopes of providing enough rigidity for penetration.[2] While the early results were encouraging, subsequent resorption of the cartilage proved disappointing.

By the 1960s, silicone and acrylic devices[3] were implanted with some successes; by the early 1970s, these devices gained popularity with the introduction of the Scott inflatable prosthesis[4] and the Small-Carrion semirigid prosthesis.[5] Since then, we have witnessed a blossoming of therapeutic modalities for the treatment of erectile failure. Our group began implanting the Scott inflatable prosthesis in 1975 and to date has implanted just over 200 of these devices.[6]

METHODS AND RESULTS

We evaluate each patient with erectile difficulty with a thorough history and physical examination and laboratory studies, including a serum testosterone and fasting blood glucose. If a clear etiology cannot be determined following these preliminary studies, further evaluation includes nocturnal penile tumescence monitoring, psychiatric evaluation, and other studies.[7] It has been the overwhelming experience in the urologic literature that when patients present with a diagnosis of impotence in the absence of symptoms suggesting hyperprolactinemia and absence of symptoms consistent with thyroid disease that these studies are unnecessary and not cost effective. Those patients who have clear-cut organic reasons for their impotence and those with psychogenic problems who fail to respond to psychotherapy are candidates for a prosthesis.

The patients are hospitalized the day prior to surgery and are given 12 hours of prophylactic intravenous antibiotic. Each implant is inserted via the standard infrapubic approach; a Foley catheter is left in place for 24 hours. The patient begins inflating and deflating the device on the second or third postoperative day, and most patients are discharged on the fourth or fifth postoperative day. Intercourse may be resumed in three weeks.

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*From Morristown Memorial Hospital and the Department of Surgery (Urology), UMDNJ-Robert Wood Johnson Medical School. Correspondence may be addressed to Dr. Saypol, Morristown Urology Associates, 40 Franklin Street, Morristown, NJ 07960.

RESULTS

The average age of the 42 patients receiving implants over the two-year period was 53. The causes of erectile dysfunction were diabetes mellitus in 22 patients, atherosclerotic cardiovascular disease in 16 patients, neurologic in 2 patients, and psychogenic in 2 patients. Of the 42 patients receiving the Scott prosthesis over the two-year period, 2 patients required subsequent removal for infection. One of these patients was an insulin-dependent diabetic and the other patient, a quadriplegic. The diabetic patient refused a second implant, and the quadriplegic patient ultimately had a semi-rigid (noninflatable) prosthesis inserted with good results. A third patient had a mechanical pump failure one year after surgery; the device was replaced and now is functioning to his satisfaction.

Thus, 40 of the total patients implanted have functioning prostheses. All patients engage in intercourse regularly with excellent patient and partner satisfaction.

The average operating time was one hour and 40 minutes while the average hospital stay was five days.

DISCUSSION

Since the introduction of improved penile prostheses in the 1970s, the urologist has become actively involved in the evaluation and treatment of erectile problems. It is of interest that prior to these devices being available, 90 percent of impotence was thought to be psychogenic; psychotherapy was the only available, and often unsuccessful, means of therapy. Today, with more sophisticated scientific studies and laboratory investigations, we now believe that approximately 50 to 60 percent of all impotence is organic in origin with most of these patients having diabetes mellitus and atherosclerotic cardiovascular disease.

The goal of the urologist with special interest in erectile dysfunction is to determine the cause and to offer the most appropriate form of therapy. If all signs and symptoms point to psychogenic origin, psychotherapy is recommended. Those patients who show no improvement following psychotherapy may benefit from a prosthetic device.

Patients whose impotence is organic are treated with hormone replacement if a clear-cut hormone deficiency is manifest. Those who fail to improve with hormone replacement and all others are offered a prosthetic device. Patients who are unable to inflate the device themselves and patients felt to be psychiatrically unfit are advised against a prosthesis Most candidates for surgery are counseled by individuals who have had a prosthesis or attend a self-help group, such as Impotence Anonymous, prior to the implantation. The reassurance that the device has worked for others is useful.

SUMMARY

Our results suggest that careful evaluation and surgery may restore satisfactory peno-vaginal intercourse in over 90 percent of patients. While the long-term results of the current device remain to be proved, patients who have had mechanical failures can be reoperated successfully. Many patients with erectile problems are unaware of a solution until they learn of it from the media. Primary physicians should recommend careful urologic, endocrine, and psychiatric evaluation for their impotent patients. Where indicated, implantable penile prostheses should be recommended to those couples who desire to continue sexual relations.

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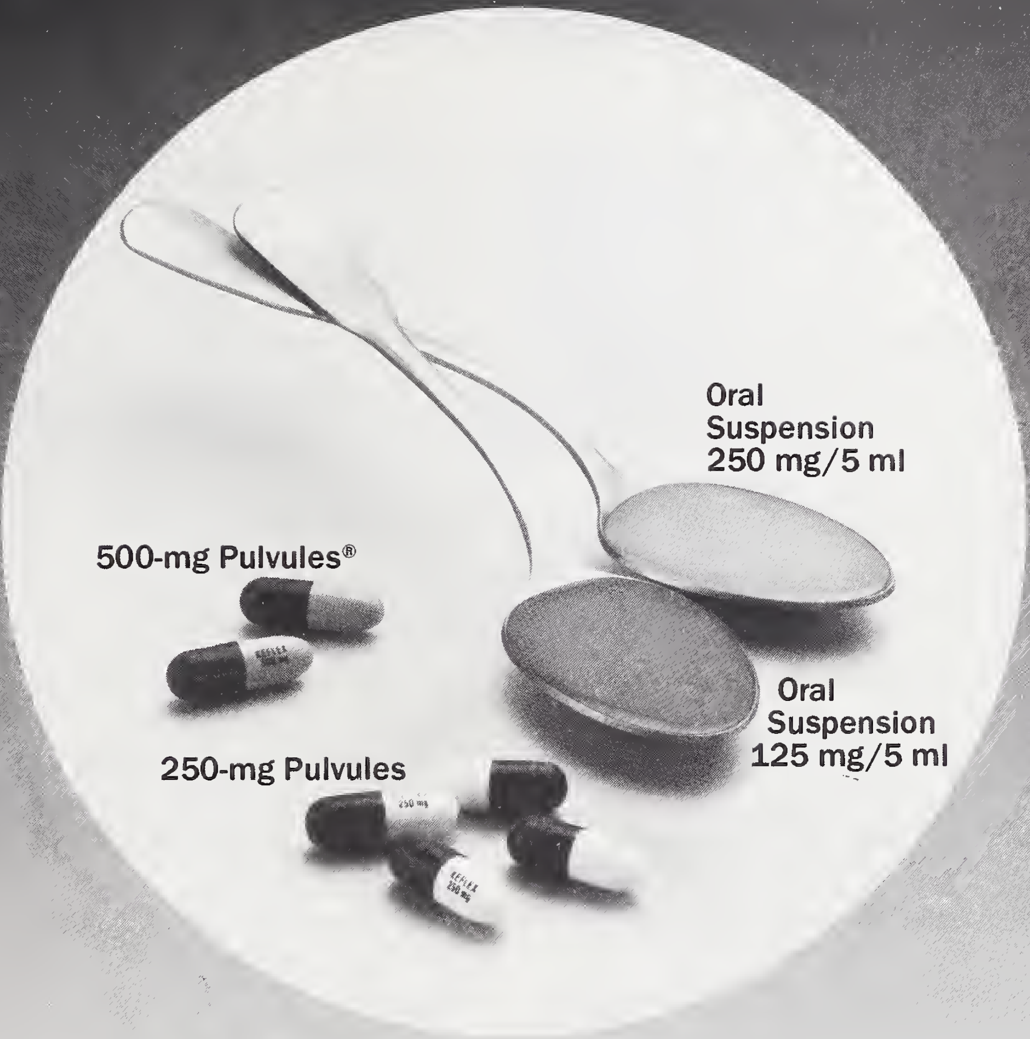

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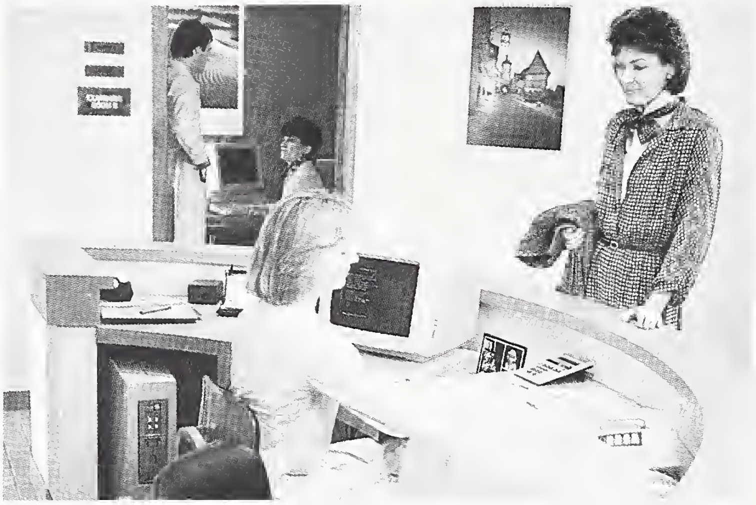

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ADVANCES IN CANCER: ANTIBODY TARGETING OF CANCER—PROSPECTS FOR DETECTION AND THERAPY†

DAVID M. GOLDENBERG, SC.D., M.D.*

Very specific polyclonal and monoclonal antibodies can be labeled with gamma-emitting radionuclides and used in vivo for cancer localization for external imaging and treatment. Cancer markers, such as carcinoembryonic antigen, alpha-fetoprotein, human chorionic gonadotropin, and prostatic acid phosphatase, have been found to be suitable targets.

Most of the search for the identification of a simple and specific cancer test has involved immunological methods, either serological or cellular in nature. Similar efforts also have been made to develop more specific therapeutic strategies. However, it is only in recent years, with the advent of new molecular approaches, such as recombinant genetics, cell cloning, and hybridoma techniques, that progress has been noted. This article summarizes some of these developments, and the current prospects for specific methods of cancer detection and therapy with radio-labeled antibodies.

MONOCLONAL ANTIBODIES

If a human or animal is immunized with an antigen, serum taken from the sensitized host will have antibody molecules, or immunoglobulins, reactive with several determinants, or epitopes, of the antigen. This mixture of antibodies derived from a population of plasma cells is referred to as polyclonal antibodies. However, if individual plasma cells or lymphocytes could be separated and cloned, each clone would have the potential to produce a single species of antibody molecule, or a monoclonal antibody. This could not be achieved readily until Köhler and Milstein demonstrated that murine myeloma cells, which are immortal malignant cells capable of producing immunoglobulins, could be fused with antibody-producing lymphocytes to secrete unlimited quantities of the desired antibody.[1] These clones of hybrid cells producing antibodies are called hybridomas. Whereas the originally stimulated lymphocytes do not survive in cell culture and myeloma cells cannot be induced to secrete antigen-specific antibodies, the hybridomas resulting from the fusion of these cells express both the specific antibody production of the lymphocyte and the immortal character of the myeloma.[2] These advances have stimulated the development and identification of antibodies against a diverse array of antigen molecules of use in biology and medicine, and have had applications in many different areas of biotechnology, including purification of substances, receptor and molecule characterization, manufacturing of antigens and antibodies, in vitro and in vivo diagnostics, and therapeutics. However, despite these successes, monoclonal

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*Dr. Goldenberg is President of the Center for Molecular Medicine and Immunology. Correspondence may be addressed to Dr. Goldenberg, Center for Molecular Medicine and Immunology, UMDNJ, 100 Bergen Street, Newark, NJ 07103.

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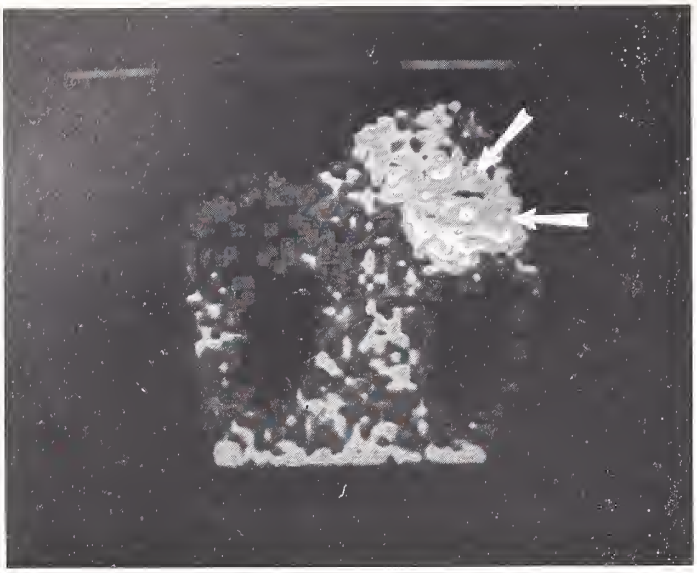

Figure—Posterior abdominal view of CEA-RAID showing liver metastasis (arrows) of a colorectal carcinoma, using computer-assisted subtraction technology.

TABLE 1

Current RAID Results

1. Sensitivity, specificity, and accuracy levels above 90 percent can be achieved in some cancer types using I-131 antibodies and computer-enhancing subtraction methods.
2. Tumors as small as 1 to 2 cm in diameter can be imaged.
3. RAID can disclose occult lesion, even up to a year before confirmation by other detection measures.
4. Antibody imaging can be positive even when blood antigen (target) levels are normal.
5. Host antibody produced against the imaging antibody is usually not problematic.
6. Immune complexes formed by interaction of the injected radioactive antibody with circulating antigen usually are not problematic for image interpretation.
7. RAID is a useful adjunctive method of cancer detection, often complementing and extending the findings of other common radiological methods.
8. The method has been found to be safe in over 800 patient studies performed by CMMI scientists, and at least another 800 studies performed worldwide.

antibodies, in cancer immunology, have not resulted in the identification of any substances which are uniquely restricted to cancer cells, so that a specific cancer marker test still remains elusive.

CANCER MARKERS AS ANTIBODY TARGETS

Although specific substances for cancers have been sought as potential immunodiagnostic tests, the experience with polyclonal antibodies and, more recently, monoclonal antibodies, has indicated that a qualitatively unique cancer marker as yet has not been identified. Most cancer markers, instead, are tumor-associated substances, i.e. constituents or products of tumor cells which are quantitatively increased as compared to their presence or secretion by nonmalignant cells. Whereas this lack of specificity precludes their use as screening or diagnostic tests for cancer, a sufficient quantitative elevation in or near neoplasia, as compared to adjacent tissues, permits a selective accretion of antibodies directed against these markers. Thus, many different kinds of cancer markers, such as lymphocyte markers, oncofetal antigens, e.g. carcinoembryonic antigen and alpha-fetoprotein, ectopic hormones, enzymes and isoenzymes, placental and feta proteins, antigens of oncogenic viruses, oncogen products, and even normal or organ antigens that become increased with neoplasia, may function as suitable target substances for antibodies carrying diagnostic or therapeutic modalities. To the extent tha there is a sufficient gradient between the level of thes antigenic markers in tumor versus normal tissues immunoconjugates (antibodies labeled with isotope or conjugated with drugs or toxins) may show a selectivity for cancer cells bearing the appropriate markers This has been the underlying principle for our studie concerned with imaging and treating cancer wit radioactive antibodies, and even before the advent o hybridoma-derived monoclonal antibodies, we succeeded in using polyclonal antibodies against commo cancer markers; these cancer markers includ carcinoembryonic antigen (CEA), alpha-fetoprotei (AFP), human chorionic gonadotropin (HCG), an prostatic acid phosphatase (PAP) to image cancer producing these substances.

RADIOIMMUNODETECTION METHODOLOGY

A merging of the disciplines of nuclear medicine an immunology, by more specific means, for the imagin of tumors has been termed radioimmunodetection o cancer.[3,4] If a selective accretion of antibodies can b achieved in cancer, then these antibodies, fulfilling th expectations of Paul Ehrlich's magic bullets, can serv to carry diagnostic and therapeutic substances to malignant tissues. However, radioimmunodetectio (RAID) is an experimental procedure, since we are engaged in defining the proper antibodies, radionuclides and image processing method since our first experimental reports of this method in 1973 and 1974.[5,6]

There are numerous requirements for the selectiv accretion of antibodies in tumors, and these includ factors related to the antigen target, the host, and th character of the antibody. The antigen should be fairl specific to the cancer cells, accessible, and abundant so that maximal antibody binding is feasible. High tumor accretion will be effected further by an antibod which is very immunoreactive and has a high bindin constant for the antigen. Regarding the nature of th antibody, there is as yet no proof that monoclonal antibodies are superior to polyclonal antibodies for cance imaging or therapy. Monoclonal antibodies are preferred because of ease and economy of production, reproducibility, and specific epitope reactivity. However binding constants of monoclonal antibodies are usually less than those of polyclonals, and the specificity o a monoclonal for a discrete antigen epitope may rende it too restricted for adequate binding to tumor cells. This is why mixtures of monoclonal antibodies, not only reacting with different epitopes of the same antigen, but also directed against different tumor-associated antigens, may be more advantageous. These may be considered engineered polyclonal antibodies.[7] In addition to the particular antibody and antigen target, the immunoglobulin subtype and the presence or absence of the Fc component of the immunoglobulin may influence antibody kinetics and binding. Antibody fragments clear the circulation much faster than whole immunoglobulin, retain the antigen-binding end of the molecule, and are less immunogenic than when the Fc portion is present.

The radionuclide attached to the antibody should have optimal imaging energy, decay properties, and conjugation stability for remaining intact with the antibody in vivo. Iodine-131 has been the radionuclide used most for labeling immunoglobulins for human applications, although it has a number of limitations, such as high radiation exposure due to its beta energy component, a high 364 keV photon energy which is not compatible with most current imaging equipment, and a tendency for rapid deiodination in vivo. On the other hand, this deiodination may be advantageous if a rapid clearance of the radionuclide from nontarget tissues is afforded. Other radionuclides, particularly radiometals such as indium-111, appear to offer some advantages over I-131, but with current conjugation methods they have a serious defect of showing an enhanced retention by the liver.

If the tumor/nontarget ratio of localization is greater than 5:1, then conventional planar nuclear medicine techniques probably would suffice for cancer imaging, or RAID. Often, however, these ratios are in the range of 2.5:1 in the initial days after administration of the imaging antibody, since there is an early high blood concentration of radioactivity, particularly noticeable in the heart and liver. One way to improve the target/nontarget ratio is to delay imaging for at least five days with whole immunoglobulin, so that background radioactivity is diminished, or to use an antibody fragment with more rapid nontarget clearance than larger, intact immunoglobulin. In our first clinical publication of RAID, we described a method of subtraction by which another radiolabeled compound, such as technetium-99m human serum albumin, is administered to mimic nontarget (blood pool) radioactivity of the labeled antibody, and then the areas of Tc-99m radioactivity are computer-subtracted from I-131 antibody-associated radioactivity.[8] The reduction in nontumor count activity results in an image with increased contrast, or a target-to-nontarget ratio which is increased by a factor of 2 or 3.[9] Another approach we are developing is the use of a second antibody, directed against primary radiolabeled antibody, for binding and clearing of the primary antibody from blood and nontarget tissues.[10] Moreover, the use of single-photon emission computerized tomography (SPECT) is believed to improve image definition, since this method usually requires a target-to-nontarget ratio of only about 2, which is in the range of antibody targeting.

RAID CLINICAL RESULTS

Based upon our experience in over 800 patient studies performed with RAID over the past eight years, using both polyclonal and monoclonal antibodies against several cancer markers (CEA, AFP, HCG, PAP, and colon-specific antigen-p), we have reached the conclusions summarized in Table 1 as the current status of RAID. It is apparent that although RAID still is a young and developing discipline, the results compare favorably with other cancer detection measures.

The abundance of our RAID studies have involved CEA antibodies labeled with I-131, and we have found a high degree of true-positivity in a number of tumor types, such as colorectal carcinoma, ovarian cancer, and cervical carcinoma.[11] In a detailed study of 51 consecutive patients with a history of colorectal cancer, an overall true-positive rate of 86 to 91 percent, a false-negative rate between 9 and 14 percent, and a false-positive rate of less than 4 percent, on a tumor site-basis, were found.[12] In 11 of the 51 patients evaluated, tumor sites were detected that were not disclosed by other detection methods until up to 40 weeks later. Subsequent studies with other polyclonal and monoclonal antibodies against CEA have supported and extended these results. An example of a colonic cancer metastasis revealed by CEA-RAID is shown in the Figure. This experience in over 500 patients given CEA antibodies has indicated to us that this new imaging modality can be used in the management of patients with colorectal cancer in a number of ways (Table 2). One of the most important indications for CEA-RAID is locating sites of occult cancer in patients presenting with a rising CEA titer, suggesting to us that RAID may provide an early method for determining tumor recurrence and spread. In order to verify this, we currently are planning a multi-institutional prospective clinical trial of CEA-RAID.

TABLE 2

Potential Uses of CEA-RAID

1. Contribute to preoperative clinical staging.
2. Evaluate cancer recurrence or dissemination.
3. Locate the source of a rising CEA titer in the blood, especially occult lesions.
4. Confirm other detection measures that are less tumor-specific.
5. Evaluate response to therapy.
6. Serve as a basis for choosing antibody-mediated therapy strategies.

The basic principles and findings of RAID in colorectal cancer, using CEA antibodies, have been found in other tumor types imaged with antibodies against AFP (testicular and hepatocellular carcinomas), HCG (trophoblastic and germ-cell cancers), and PAP (prostatic carcinoma).[13-15] It is interesting to note that in all these RAID studies, circulating levels of the antigen target may complex with the administered radioactive antibody without compromising the RAID findings.[8,12,13-15]

RADIOIMMUNOTHERAPY

The ability to locate tumors by injection of relatively specific antibodies labeled with an appropriate gamma-emitting radionuclide has resulted in a strong interest in therapy with suitably radioactive antibodies. In addition to I-131, a number of alpha- and beta-emitting radionuclides, such as copper-67, scandium-47, and yttrium-90, are of interest.

Order and coworkers have administered I-131 antiferritin and anti-CEA antibodies to patients with primary hepatic carcinomas (cholangiocarcinoma and hepatoma), while also applying external irradiation and chemotherapy. In a recent report by this group, a remission was obtained in 11 of 28 patients having hepatomas that did not secrete AFP, with the longest remission lasting three years. In biliary cancer, 4 of 6 patients remitted with I-131 anti-CEA IgG, while I-131 antiferritin antibody resulted in regressions in 4 of 5 patients with non-oat-cell lung carcinomas.[16] The treatment of melanoma with I-131 melanoma antibody has been reported by Carrasquillo and colleagues.[17] At cumulative doses ranging from 134 to 861 mCi, it was found that 2 of 3 patients at the higher doses showed a transient, partial tumor regression. The intracavitary application of I-131 monoclonal antibodies for the treatment of tumors in the pleura, pericardium, and peritoneum has been advocated by the Hammersmith Oncology Group, who reported initial promising results.[18]

At our own institution, we are engaged in Phase I clinical therapy trials of I-131 anti-CEA and anti-AFP antibodies in patients with advanced cancers which produce CEA or AFP. Doses between 25 and 75 mCi I-131 monoclonal antibodies are under investigation in different schedules. In a current series of 14 patients treated with radioimmunotherapy (RAIT), 3 have shown evidence of tumor response, mostly mixed in nature. Bone marrow toxicity at the higher, repeated radiation doses has appeared, as well as host anti-mouse antibody formation, which are limiting factors for this therapy. The use of different dose schedules, antibodies, and radionuclides are under investigation in an attempt to improve the prospects for antibody-mediated isotopic therapy of disseminated cancer.

SUMMARY AND CONCLUSIONS

The development of highly specific polyclonal and monoclonal antibodies against common cancer markers, such as CEA, AFP, HCG, and PAP, have enabled their use to locate and disclose tumor sites producing these substances by external imaging methods. This approach, called radioimmunodetection, involves the injection of small quantities of these antibodies labeled with a suitable gamma-energy emitter, such as I-131, which then accretes in the antigen-containing tumors and shows a target-to-nontarget ratio of about 2.5:1 or greater within the first days of administration. This ratio increases with time, and can be higher at early imaging times if antibody fragments are used. We also have developed a computer-assisted subtraction method which enhances this ratio by a factor of 2 or 3, thus permitting early disclosure of tumor sites in regions of high background radioactivity, such as blood-rich organs (heart and liver). Using these methods of RAID in patients with breast, lung, colorectal, pancreatic, liver, ovarian, testicular, and prostatic carcinomas, sensitivity, specificity, and accuracy rates approaching over 90 percent have been achieved, with documented cases of occult cancer disclosed. Using similar principles, antibody-mediated isotopic therapy of cancer is under active investigation, and preliminary results by various research groups have indicated some responses can be achieved with I-131 labeled antibodies in cancers of the liver, colorectum, pancreas, lung, and in melanoma. However, these early results need to be confirmed and extended, preferably with additional advances which would decrease bone marrow toxicity and the human anti-mouse antibody response noted with repeated administration of murine monoclonal antibodies.

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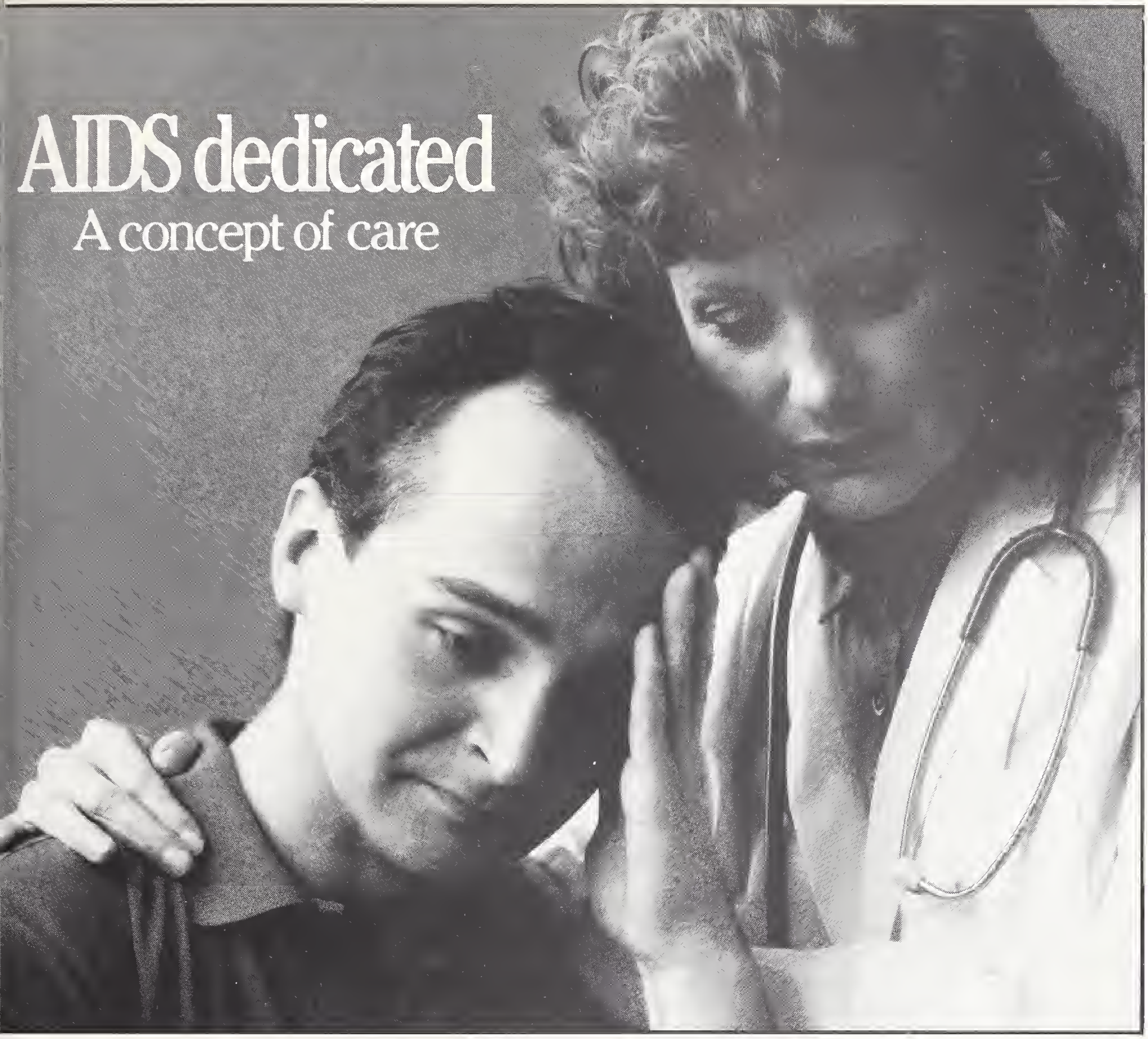

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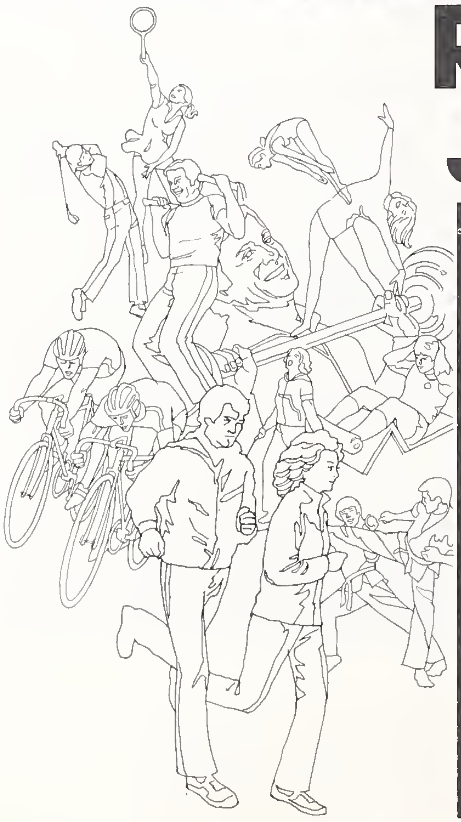

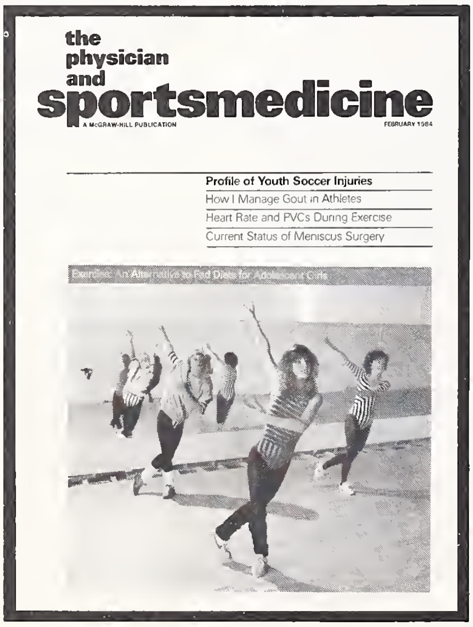

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STATUS OF AMA MEDICARE LAWSUIT

Although disappointed by the court's denial of its request for a preliminary injunction to prevent the government from compelling physicians to make immediate participating non-participating elections under Medicare, the AMA is gratified that its Medicare lawsuit already has yielded some positive results for the profession.

That is the perspective of James H. Sammons, M.D., AMA's Executive Vice-President, following a detailed analysis of what has transpired since AMA brought its lawsuit December 31, 1986, against the Department of Health and Human Services. The suit challenges the constitutionality of certain provisions of the Omnibus Budget Reconciliation Act (OBRA).

AMA's request for a preliminary injunction was denied January 20, in a decision rendered by Judge Barefoot Sanders of the Federal District Court for the Northern District of Texas.

While that outcome was not unexpected, the specific findings of fact and law were disappointing and, in many cases, not reflective of the record of evidence before the court, Dr. Sammons noted.

There were two facts, for example, that were undisputed in the proceeding: (1) There is no way for physicians who don't have Medicare freeze base-period charges to make even crude calculations of their Maximum Allowable Actual Charges (MAACs). (2) Data on base-period charges, prevailing charges, and 50th percentile charges—as stated explicitly in the government's own carrier memorandum—are necessary "to permit an informed decision" with regard to participation.

Unfortunately, Judge Sanders' legal conclusions were derived, in large part, from the non-AMA physician lawsuits challenging the fee freeze in the 11th Circuit Court of Appeals and the Oklahoma District Court. The AMA attempted to discourage the filing of those lawsuits.

Since the AMA takes exception to Judge Sanders' findings, it may appeal even this preliminary decision. It is now pondering the merits of doing so.

In his ruling, Judge Sanders said that "the appropriate forum for plaintiffs' grievances is the Congress, not the courts."

That opinion leads the AMA to be obviously less than optimistic about prevailing on the underlying Constitutional issues which remain to be tried. The AMA's case, however, will be pursued vigorously on behalf of the profession and Medicare patients, because of the important principles and issues that are involved, Dr. Sammons said.

Despite the adverse decision on AMA's plea for injunctive relief, several beneficial results have been achieved within the past 30 days. Dr. Sammons cited these examples:

- Some relief from OBRA was achieved. The AMA sought an injunction on the basis of the unfairness involved in requiring physicians to make participation decisions and to comply with OBRA without adequate time, guidance, and data. In filing for injunctive relief in Lubbock on December 24, AMA's attorneys convinced Judge Woodward that the system was "unfair." He thus granted a ten-day restraining order against enforcing the key provisions of OBRA. Judge Sanders found Judge Woodward's action and rationale sound enough to permit an additional ten-day extension until January 20.
- In response to AMA's arguments of basic unfairness the government also made several concessions: It strongly hinted that any apparent charge violations which occur during the period January 1 to March 1, 1987, will not be used for bringing sanctions against physicians for exceeding their MAACs. This recognizes the massive confusion existing among the profession regarding acceptable OBRA charge levels. It reversed its decisions to use the MEDIAN of base-period charges rather than the WEIGHTED AVERAGE in computing MAACs. This decision responded to AMA's contention that the government had violated Administration Procedure Act provisions by not permitting public comment. It should result in increased reimbursement levels for both physicians and patients.
- The government directed carriers to advance by two full months the deadline for providing all physicians with their complete MAAC data. Prior to AMA's lawsuit physicians have been advised they would receive their MAAC data by March 31. Under a new HCFA directive issued in January, carriers were advised they must provide this information no later than January 31.
- HCFA also consented to give physicians an additional 10 days (until January 30) to make their 1987 Medicare elections—if they had not already made such an election. This additional time was granted by HHS at the direct request of the AMA.

The AMA's legal action sent a clear message to HHS and to Congress that it will challenge arbitrary health legislation ramrodded through at the eleventh hour by congressional leaders and ensuing confusing procedures that are hastily devised and implemented without a fair comment period. Although HHS was not responsible for OBRA, its subsequent actions contributed to physician problems in many ways. At the injunction hearing the plaintiffs conveyed striking examples of how HHS communicates differently to carriers than to physicians—putting obligations on carriers to help physicians, but not advising physicians what carriers' obligations are. As a result, such practices may be prevented in the future. The legal challenge also may deter Congressional leaders from rushing through arbitrary last-minute legislation in the future. The HHS has estimated that the temporary restraining order will cost the government at least $1.5 million a day. This reflects the cost of delaying implementation of the 4 percent reimbursement penalty on non-participating physicians and their patients.

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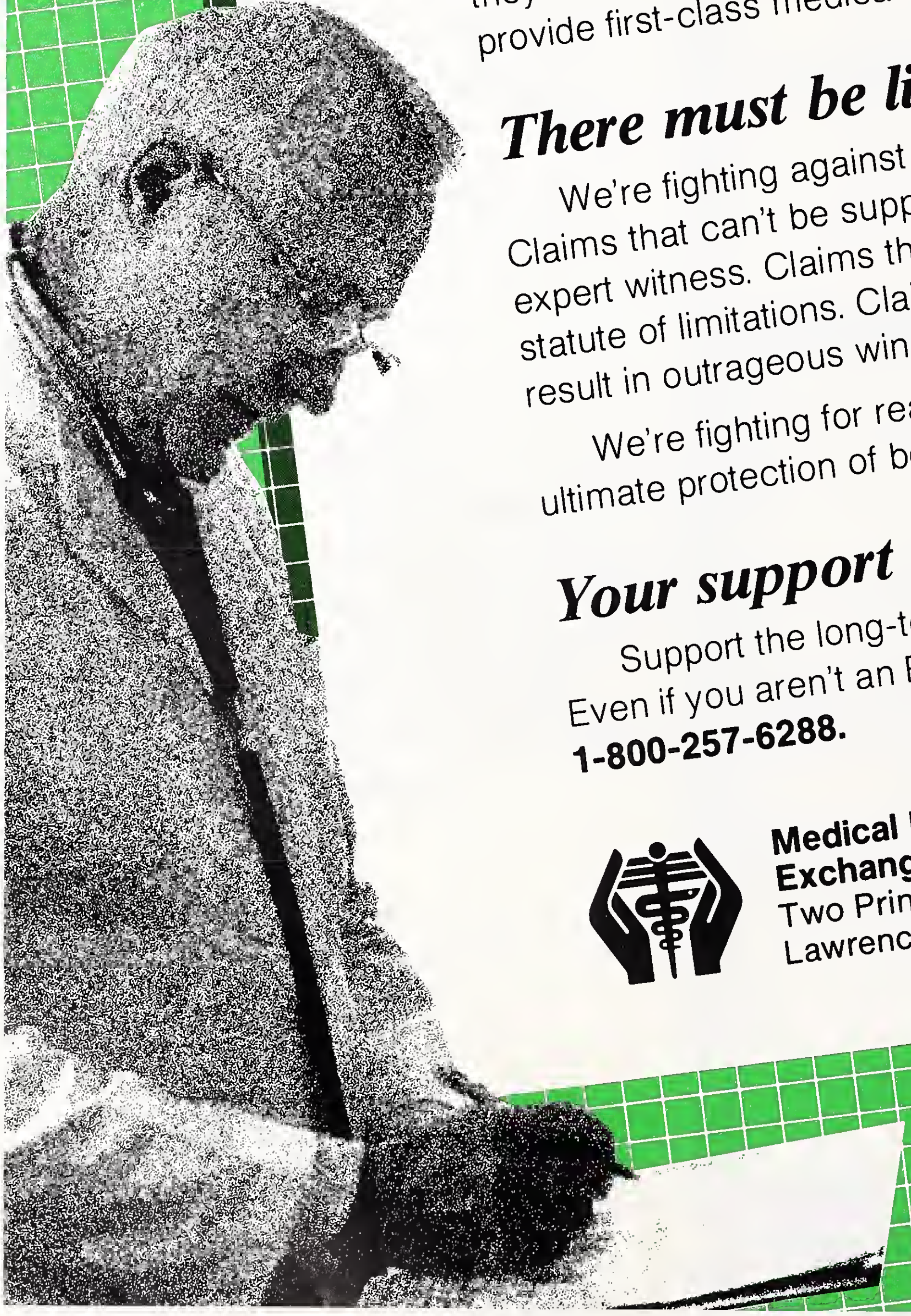

DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; Advances in Cancer; Physicians Seeking Location in New Jersey

Trustees' Minutes January 18, 1987

A regular meeting of the Board of Trustees was held on Sunday, January 18, 1987, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Medical-Political Action . . . Noted the information presented by Harold L. Colburn, M.D., Chairman, Assembly Committee on Health and Human Resources, and Mr. Joseph W. Katz, MSNJ legislative representative:

(1) A-2511 and A-3305 . . . Noted these two bills dealing with Medicare assignment are in Assembly Committee.

(2) How the Medical Community Can Help . . . Noted that physician participation at the committee or pre-committee level is more likely to impact the end result of legislation; also, noted telephone and letter writing campaigns do make a difference.

(3) S-2261 and A-2647 . . . Noted the first bill allowing optometrists to prescribe drugs was in Senate Committee and the second bill concerning referrals to physical therapy services was out of Assembly Committee.

(4) Proposed Measures for Cost-Cutting . . . Noted that two recommendations would be opposed by MSNJ: the first that DRGs be applied to restructure New Jersey's cardiac care costs to keep them competitive with other states and the second that physician assistants be licensed.

(5) Financial Support for Political Candidates . . . Noted that substantial funding is needed by JEMPAC to reach established goals—from county societies and from individual members.

Report of Executive Director . . .

(1) MSNJ Paid Membership . . . Noted that as of December 31, 1986, total membership was 7,598.

(2) MSNJ Financial Statements . . . Approved financial statements for the period ending November 30, 1986.

(3) Pronouncement of Death and Completion of Death Certificate—State Board of Medical Examiners . . . Noted that MSNJ sent a communication urging the SBME to rescind publication of a pronouncement of death/completion of death certificate proposal and to establish a working committee which includes the Department of Health, SBME, the State Board of Nursing, the State Board of Funeral Directors, the Attorney General's Office, the State Medical Examiner, MSNJ, the New Jersey State Nurses Association, the Funeral Directors Association, and the State Association of Chiefs of Police to assist in settling the issues and resolving problems.

(4) Legislative Update . . .

(a) Tort Reform . . . Noted that efforts will be continued to achieve favorable action on tort reform.

(b) No-Fault Fee Schedule . . . Noted that an impasse on the amended bill is likely in the Senate.

(c) Medicare Participation . . . Noted that HCFA had instructed Part B carriers to mail materials on the new Medicare participation law to physicians by January 31; as of January 16, Prudential responded to 3,400 requests for information regarding the new Medicare format.

(5) Medical Licensure . . . Concurred with the action of the Executive Committee; the Committee approved and forwarded a response to the AMA Council on Medical Education regarding the medical licensure issue to be considered by a task force.

(6) Students Attending AMA Leadership Conference . . . Voted to maintain its present protocol for reimbursing the expenses of one student from each of the medical schools, with the understanding that, should Newark Medical School voluntarily waive the opportunity for representation at the Conference, funds would be allocated appropriately by staff for the expenses of two students from Robert Wood Johnson Medical School. (If a school wishes to send more than one student, reimbursement will be capped at $1,000 per school.)

(7) Bergen County Medical Society versus PRO of New Jersey, Inc. . . . Noted that this issue will not be litigated.

(8) Responsibility/Accountability in University Hospital Teaching Programs . . . Noted that UMDNJ, the Association for Hospital Medical Education, and PRO of New Jersey, Inc. are willing to meet to discuss the issue of responsibility in decision making by residents and fellows in hospital teaching programs and the accountability of the physicians teaching them.

UMDNJ Report . . . Received from Dr. Bergen his monthly written report. Also, noted that Dr. Bergen requested that specific difficulties with the advertisements for Robert Wood Johnson University Hospital be pointed out so that he can take appropriate action. And, noted that Dr. Bergen hopes that a recommendation to the Board of Higher Education and to the Department of Health requesting a 25 percent reduction in graduate medical education slots in New Jersey over the next five years be received favorably. (Note: Dr. Bergen explained that many of the residency programs are being used for service purposes alone, rather than educational purposes, which is a violation of the residency principle; and, further, that residency programs are a critical factor in supplying physicians into a community.)

New Jersey Hospital Association . . . Received from Mr. Scibetta his written report noting: the Uncompensated Care Trust Act was enacted and is effective immediately; S-2137 (allowing funding for three or four Health Systems Agency-type entities to be paid for a pass-through levy on hospital licensing fees and a local certificate of need fee) passed in the Senate and is scheduled for a hearing in the Assembly Health and Human Services Committee; and the proposal relating to Medicaid emergency room reviews will be discussed at a future time.

Council on Public Health . . .
(1) Resolution #44E . . . Granted Dr. Moloney's request to postpone review of a recommendation on bedside reagent strip blood glucose determination in the hospital setting until he had a chance to review additional information he received.
(2) Irradiated Foods . . . Approved the following recommendation . . .

That the Medical Society of New Jersey take a position of active opposition on S-1801.

(Note: S-1801 requires food processors and public eating places to provide written notice to consumers whenever food offered for sale has been treated with radiation in the course of processing for preservative purposes or any other reason.)
(3) Comprehensive Cancer Center for New Jersey . . . Approved the following recommendation:

That the Medical Society of New Jersey endorse the concept of a comprehensive cancer center for New Jersey, under the auspices of UMDNJ, to be developed in consultation with the major existing organizations that are concerned with cancer control, such as the Committee on Cancer Control of the Medical Society of New Jersey, the New Jersey State Commission on Cancer Research, the American Cancer Society, the Oncology Society of New Jersey, the New Jersey Department of Health, and other responsible groups.

(4) Opposition to Ocean Dumping . . . Approved the following two recommendations:

That the Medical Society of New Jersey reaffirm its position of opposition to ocean dumping and continue to pass these views on to the appropriate state and federal legislators; and

That the Medical Society of New Jersey encourage epidemiological research on the health effects of ocean pollution.

Committee on Membership Services . . . Did not adopt the following recommendation:

That the Medical Society of New Jerse endorse the Gold MemberCard Progran administered by Trans National Financial Services as a service to be offered t the membership.

Young Physicians Steering Committee . . . Approved the followin recommendations:

That the Board of Trustees approve th establishment of a Committee on Youn Physicians.
That the President of the Medical Societ appoint a young physician as chairmar and that each county select a youn physician representative and alternate t serve as members.
That the Young Physician's Steerin Committee be discharged.

Committee on Long-Range Planning and Development . . . Note the following items of interest:
(1) Need for Holding an Interin Meeting . . . Noted that the Bylaw provide for the calling of a specia session of the House to conside major issues, and monthly meeting

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(2) Resolutions . . . Approved the following recommendation:

> That a study be conducted to determine the manner in which the county medical societies perceive the intent and format of Resolution #13—Interim Meeting of the MSNJ House (1986).

And adopted a recommendation to have a joint meeting of the Committees on Annual Meeting and Long-Range Planning and Development.

New Business . . .
American Medical News . . . Referred the following resolution to the AMA Delegation:

> Whereas, *American Medical News* is currently received by only AMA members; and
> Whereas, *American Medical News* is an exemplary publication; and
> Whereas, we are enjoined in an effort to recruit new members for organized medicine; and
> Whereas, *American Medical News* is one of the major benefits of AMA membership; now therefore be it
> **Resolved,** that the AMA consider sending the American Medical News to all licensed physicians in a restricted geographic location (such as the state of New Jersey) on a trial basis for a six-month period in order to measure the impact that such distribution would have on AMA membership.

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.
President

To fulfill its mission as the state health care system, the University of Medicine and Dentistry of New Jersey reaches out to provide accessible high-quality medical services for all New Jerseyans—urban, suburban, and rural. In this capacity, one of the University's top priorities has been delivery of medical care to the urban poor, primarily in Newark, where UMDNJ serves as the "family doctor" for thousands of indigent patients.

And, as the state-designated medical provider, the University is constantly creating and enhancing health services to meet the emerging needs of New Jersey residents. Many of UMDNJ's recent innovations in primary and community health care involve child and adolescent medicine, mental health services, dentistry, and geriatrics.

Children's teeth got a new look last year from New Jersey Dental School's Pediatrics Department. With a $25,000 grant from the state's Department of Health, UMDNJ dental teams screened 4,000 youngsters in eight high schools around the state.

In New Jersey Medical School's Adolescent Medicine Clinics, 5,000 teenagers with problems ranging from sports injuries to pregnancy were seen in its three Newark facilities at University Hospital, United Hospitals Medical Center, and St. Michael's Medical Center. The Adolescent Medicine Division plans to expand its services to Newark teenagers with a school-based clinic in a city high school this year. Also planned is a clinic for New Brunswick's teenagers, jointly operated by Robert Wood Johnson Medical School and its core teaching facility, Robert Wood Johnson University Hospital.

The University's mental health programs, administered by the Community Health Centers at Piscataway and Newark, meet a variety of needs for individuals and families in community-based settings. Recently, the Piscataway Center has initiated a number of specialized services aimed at children and families:

- A program for the 3,000 students at Piscataway High School educates young people, their parents, and school staff in prevention, counseling, and treatment for substance abuse.
- In Middlesex Borough, a Center program teaching children decision making and coping skills has been cited by the state's Department of Education as a model for all school districts in New Jersey.
- A school-based program in Monroe Township, chosen as a state-funded youth suicide prevention project, is staffed and administered by the Center's mental health professionals.

Like the Piscataway-based Center, the Newark Community Mental Health Center offers a comprehensive service delivery program for those in need of crisis intervention, short-term or long-term counseling, and treatment. New and expanding specialized programs include battered women and rape victim counseling services, parenting education for troubled families, and a phobia clinic.

The "graying" of New Jersey—its aging population—has resulted in the University's major initiative in a relatively new medical speciality, geriatric medicine. Some 200,000 New Jerseyans, most of them over 65, are affected by Alzheimer's disease, a terminal brain illness characterized by progressive memory loss. Last year, construction for the state's first resource for this debilitating illness, the Institute for Alzheimer's Disease and Related Disorders, got underway on the Piscataway campus. The Institute will function as a resource and referral center, a day program, respite and support system for families afflicted with the disease, and a diagnostic and treatment service in conjunction with Robert Wood Johnson Medical School. Also in development are plans for a day care

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respite program for Alzheimer's victims and caregivers at the School of Osteopathic Medicine on the South Jersey campus at Stratford.

Also last year, another geriatric-oriented service, a unique county-wide dentistry program, implemented at New Jersey Dental School, was the recipient of a national award from the American Dental Association. The program, based at the Newark and 11 satellite centers, provided dental care for the medically needy elderly.

Since the state's population is aging most rapidly in the south, the two University campuses there are developing and expanding their geriatric medical services. At Robert Wood Johnson Medical School-Camden, the Division of Gastroenterology, together with geriatric medical and community programs, is enlarging these to comprise a comprehensive medical delivery system for the elderly. These include expansion of the geriatric diagnostic clinic at Stratford to a regional service program and the establishment of a geriatric inpatient unit at the Kennedy Memorial Hospitals in Stratford, the school's core teaching facility, to centralize treatment of elderly patients with multiple medical problems, for improved care.

As the health provider for New Jersey, UMDNJ continues to expand its mission of providing the highest quality medical care for every citizen of the state.

Advances in Cancer

The article by Dr. Goldenberg, "Monoclonal Antibodies for Cancer Detection and Treatment," is the next in our series on advances in cancer (page 195). It provides us with a survey of how techniques developed by him and others may enable us to identify occult cancer at an earlier time when treatment is more likely to be effective, and how antibody-mediated isotopic therapy may lead to beneficial clinical results.

Monoclonal antibodies are a single species of antibody molecules produced in response to specific antigens. They may be produced by immunizing mice with antigenic material and fusing splenic B cells of immune mice with certain murine plasmacytoma cells. The B cells provide specific immunologic information and the plasmacytoma cells provide the cellular machinery for antibody production.

Current biotechnoloy had provided a vast methodology making possible the application of such techniques to the detection of cancer and to the potential role for treatment of malignancy.

Many human tumors produce specific tumor-associated antigens. These may serve as targets for radiolabelled antibody, making feasible ways to identify the presence of perhaps occult cancer cells. Further, such antibodies potentially could serve as immune carriers of radioisotopes or chemotherapeutic agents to tumors, serving therefore as a therapeutic modality as well.

Alan J. Lippman, M.D.

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ALLERGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, clinical immunology. Solo or partnership. Available July 1987.

ANESTHESIOLOGY—Lee A. Balaklaw, M.D., 575 Easton Ave., Apt. 6M, Somerset, NJ 08873. Far Eastern University (Philippines) 1980. Board eligible. Group or partnership. Available July 1987.

Alan Miller, M.D., 260 First St., Apt. C13, Mineola, NY 11501. Eastern Virginia 1982. Board eligible. Group or partnership. Available July 1987.

DERMATOLOGY—Norman R. Friedma M.D., 1736 Humphrey, Birmingha MI 48008. SUNY-Upstate 1983. Boar eligible. Partnership, solo, grou Available July 1987.

ENDOCRINOLOGY—John Hodge, M.D Naval Hospital, Endocrine Branc P.O. 566, San Diego, CA 0213 UMDNJ 1979. Board eligible. Boar certified (IM). Group with academi association. Available May 1987.

Issac Sachmechi, M.D., 61-55 98th St #16B, Rego Park, NY 11374. Technio 1980. Also, internal medicine. Boar certified. Group or partnership. Available July 1987.

FAMILY MEDICINE—Raymond Ebarb, M.D., 61-14th Ave., Wes Babylon, NY 11704. Guadalajara 198 Board eligible. Group or partnershi Available July 1987.

Roberto J. Irving, M.D., St. Mary Hospital, 308 Willow Ave., Hoboken, N 07030. Guadalajara 1985. Boar eligible. Group or partnership. Available July 1987.

IMMUNOLOGY—Jerome Michael Shie M.D., 11546 February Cir., Apt. 20 Silver Springs, MD 20904. UMDN 1982. Board eligible. Also, allergy. Sol or partnership. Available July 1987.

INTERNAL MEDICINE—Jae Hong, M.D 90-17 52nd Ave., Elmhurst, NY 1137 Seoul National (Korea) 1982. Boar eligible. Partnership or group. Available July 1987.

Thomas E. Jackson, M.D., 251- Leveland Ln., Modesto, CA 9535 Guadalajara 1981. Board eligibl Group, partnership, solo. Available.

Harvey Mossman, M.D., 120 Marcellu Rd., #2U, Mineola, NY 11501. Me Coll. of Pa. Board eligible. Group, par nership, solo. Available July 1987.

Jashubhai G. Patel, M.D., 111-15 6 Ave., Apt. 2B, Forest Hills, NY 1137 Medical College Baroda (India) 197 Also, pulmonary. Board certifie Group or partnership. Available Jul 1987.

Issac Sachmechi, M.D., 61-55 98th S #16B, Rego Park, NY 11374. Technio 1980. Also, endocrinology. Board ce tified. Board eligible (ENDOCRIN Group or partnership. Available Jul 1987.

Michael F. Scharle, M.D., 1754 E. 2n St., Long Beach, CA 90802. Guadalajara 1979. Also, pediatrics. Boar eligible. Solo or partnership. Availabl

John A. Stankoski, M.D., 10 Overloo Rd., Apt. 4H, Summit, NJ 0790 Bologna (Italy) 1984. Partnership, sol group. Available July 1987.

NEUROLOGY—M.E. Dughly, M.D., 900 Ridge Ave., Unit 28, Philadelphia, P 19128. Damascus (Syria) 1974. Boar eligible. Group, partnership, solo, ho pital. Available.

MSNJ ANNUAL MEETING

April 30-May 3, 1987
Americana Host Farm

OBSTETRICS/GYNECOLOGY—Rigoberto Cerda, M.D., 110 Font Martero St., Humacao, Puerto Rico 00661. Santo Domingo 1963. Board eligible. Available.

Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. Texas (San Antonio) 1983. Board eligible. Group or partnership. Available July 1987.

Michael Molina, M.D., 4 Howard Ct., Staten Island, NY 10310. Guadalajara 1981. Board eligible. Partnership. Available July 1987.

Michael A. Schiavone, M.D., 447 Linwood Ave., Buffalo, NY 14209. Pittsburgh 1982. Group, partnership, solo. Available July 1987.

Lee Anthony Tripp, M.D., 541 Brinton St., Philadelphia, PA 19144. Temple 1981. Board eligible. Solo or partnership. Available.

PEDIATRICS—A-salam Al-Hafidh, M.D., 2609 Featherstone Rd., #239, Oklahoma City, OK 73120. Baghdad Medical College 1976. Also, pediatric gastroenterology. Board eligible. Group, partnership, solo. Available July 1987.

PULMONARY—Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

PSYCHIATRY—Arthur Dworetz, M.D., 2355 Tilbury Ave., Pittsburgh, PA 15217. North Carolina 1983. Board eligible 1987. Group, partnership, solo. Available July 1987.

PULMONARY—Allen J. Salm, M.D., 3270 Warrensville Ctr. Rd., Apt. 210, Shaker Heights, OH 44122. Case Western Reserve (1985). Board eligible. Group, partnership, solo. Available July 1987.

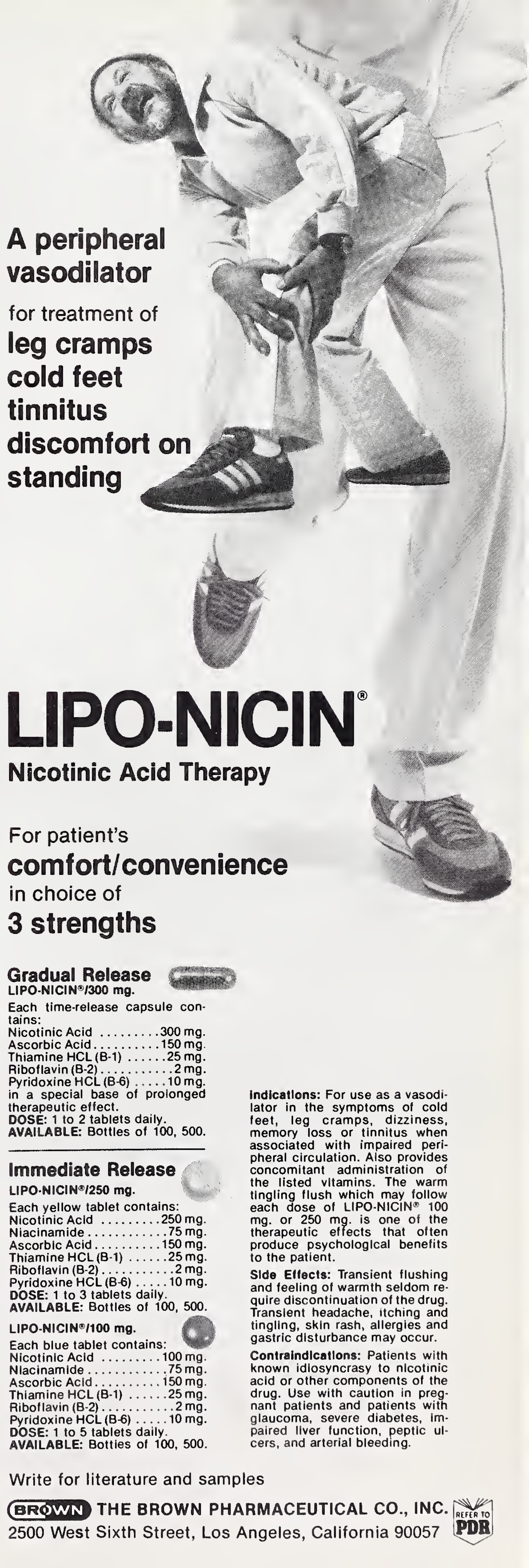
RHEUMATOLOGY—Robert Lesser, M.D., 7560 Woodcrest Ave., Philadelphia, PA 19151. Chicago Medical 1982. Board eligible. Board certified (IM). Group, partnership, hospital-based. Available July 1987.

SURGERY—Peter H. Block, M.D., 1332 Weathervane Ln., Apt. 2A, Akron, OH 44313. New York Medical 1982. Board eligible. Group or partnership. Available July 1987.

Patrick P. Montefusco, M.D., 4 Montfort Dr., Huntington, NY 11743. Georgetown 1977. Board certified. Partnership. Available.

Dorian J. Wilson, M.D., 28 Diana Dr., South Plainfield, NJ 07080. UMDNJ 1982. Board eligible. Hospital staff, medical school affiliate. Available July 1987.

UROLOGY—Steven E. Marks, M.D., 9207 Groundhog Dr., Richmond, VA 23235. Bowman Gray 1982. Board eligible. Group or partnership. Available.



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•

Martha Calderwood, M.A.
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4:30 PM	MEDICAL POST-OP MANAGEMENT	*William S. Frankl, M.D.*
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CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

ANESTHESIOLOGY

April
1 **Anesthesiology Grand Rounds**
8 4:00—NJ Medical School,
15 100 Bergen Street, Newark
22 *(UMDNJ)*
29

6 **Lecture Series**
13 7:45 A.M.—Newark Beth Israel
20 Medical Center
27 *(UMDNJ and Newark Beth Israel Medical Center)*

8 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson
Medical School, New Brunswick
(UMDNJ)

May
4 **Lecture Series**
11 7:45 A.M.—Newark Beth Israel
18 Medical Center, Auditorium,
25 Newark
(UMDNJ and Newark Beth Israel Medical Center)

6 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson
Medical School, New Brunswick
(UMDNJ)

6 **Anesthesiology Grand Rounds**
13 4 P.M.—100 Bergen Street, Newark
20 *(UMDNJ)*
27

CARDIOLOGY

April
10 **Cardiac Arrhythmias in Children**
8-9 A.M.—Overlook Hospital,
Summit
(Overlook Hospital and AMNJ)

May
6 **Cardiology Update**
13 **Seizures**
8:30-10 A.M.—Alexian Brothers
Hospital, Grassman Hall, Elizabeth
(Alexian Brothers Hospital and AMNJ)

MEDICINE

April
1 **Annual Otto Brandman, M.D., Award Ceremony**
6:30 P.M.—Hyatt Regency Hotel,
New Brunswick
(American Diabetes Assoc., NJ Affiliate, Inc. and AMNJ)

1 **AIDS**
4:15-5:15 P.M.—Kessler Institute for
Rehabilitation, West Orange
(NJ Department of Health and AMNJ)

1 **Continuing Education Series**
15 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant
Valley Way, West Orange
(UMDNJ and Kessler Institute for Rehabilitation)

1 **Treatment of Anxiety and Depression in the Elderly**
8:30-10 A.M.—Elizabeth General
Medical Center
(Elizabeth General Medical Center)

1 **Allergy Immunology II**
8 **Allergy Immunology III**
15 **Pituitary Adrenals and Reproductive Endocrinology**
22 **Thyroid, Calcium Metabolism, and Metabolic Bone Disease**
29 **Diabetes Mellitus, Lipid Metabolism, and Ectopic Hormones**
8:30-10 A.M.—Alexian Brothers
Hospital, Grassman Hall, Elizabeth
(Alexian Brothers Hospital and AMNJ)

1 **Medical Lecture Series**
8 10:30 A.M.-12 noon—Christ
15 Hospital, Jersey City
22 *(Christ Hospital and AMNJ)*
29

1 **Treatment of Hypertension in the Elderly**
8 **Grand Rounds**
15 **New Concepts in the Management of Coronary Artery Disease**
22 **Grand Rounds**
29 **Grand Rounds**
12 noon-1 P.M.—Robert Wood
Johnson Medical School, Rm. 102,
Medical Educ. Bldg.,
New Brunswick
(UMDNJ)

1 **Endocrine Conferences**
8 3:30-5 P.M.—Rotates between
15 Newark Beth Israel Medical Center,
22 United Hospitals, University
29 Hospital, Newark, and VA Medical
Center, East Orange
(Endocrine Section, AMNJ)

2 **Management of Abdominal Emergencies**
11 A.M.—St. Joseph's Hospital and
Medical Center, Paterson
(St. Joseph's Hospital and Medical Center and AMNJ)

2 **AIDS**
11:45-12:45 P.M.—John F. Kennedy
Medical Center, Edison
(NJ Department of Health and AMNJ)

2 **Allergy, Immunology, and**
9 **Infectious Diseases**
16 11:00 A.M.—Children's Hospital,
23 Newark
30 *(UMDNJ)*

2 **Blood Bank Conferences**
9 4:00 P.M.—University Hospital,
11 Room C-128, Newark
23 *(UMDNJ)*
30

2 **Molecular Medicine**
9 4-6 P.M.—Copewood Street, Camden
23 *(Coriell Institute for Medicine*
30 *Research)*

3 **Antibiotic Resistance**
12 noon-1:15 P.M.—Bridgeton
Hospital
(Bridgeton Hospital and AMNJ)

3 **Grand Rounds—Rehabilitation Medicine**
1:30-2:30 P.M.—New Jersey Medical
School, Newark
(UMDNJ)

3 **Department of Medicine Grand Rounds**
9-10 A.M.—St. Francis Medical
Center, Crean Hall, Trenton
(St. Francis Medical Center)

3 **Changes in Health Care—Delivery and Financing**
21 **CDS Prescribing Practices—Legal/Illegal**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

3 **Medieval Foods of Love**
10 **Nutritional Support of the Cancer Patient**
24 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical
Center, Annex. Aud., Rms. B and C,
Newark
(United Hospitals Medical Center and AMNJ)

3 **Pain Management Center**
10 8:00 A.M.—NJ Medical School,
17 100 Bergen Street, Newark
24 *(UMDNJ)*

3 **Urology Basic Science Conference**
10 3-4 P.M.—New Jersey Medical
17 School, Rm. C-600, Newark
24 *(UMDNJ)*

3 **Urology Grand Rounds**
10 4-6 P.M.—New Jersey Medical
17 School, Newark
24 *(UMDNJ)*

4 **Hyperalimentation**
28 **Nutrition and High Blood Pressure**
8:30 A.M.—Palisades General
Hospital, North Bergen
(Palisades General Hospital and AMNJ)

6 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson
Medical Center, Academic Health
Science Center, Rm. 393,
New Brunswick
(UMDNJ)

6 **University Hospital Tumor**
13 **Conference**
20 8:00 A.M.—University Hospital,
27 Newark
(UMDNJ)

7 **Pulmonary Conference**
14 8-9 A.M.—University Hospital,
21 Rm. H-349, Newark
28 *(UMDNJ)*

Medicolegal Problems in Obstetrical and Gynecological Ultrasound

at

UMDNJ-Robert Wood Johnson Medical School

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Saturday, March 21, 1987
8:30 a.m.-3:15 p.m.

This program is intended for all Radiologists, Gynecologists, Obstetricians, and technologists (sonographers) who refer their patients for or actively perform diagnostic ultrasound procedures. The discussions will include the current extent of the malpractice crisis in ultrasound in the United States and locally in New Jersey, guidelines in the proper utilization and practice of obstetrical and gynecological ultrasound, and other emerging legal issues in ultrasound. A display of ultrasonic and radiographic equipment will be available.

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Wednesday, April 1, 1987

UMDNJ-New Jersey Medical School,
Newark, New Jersey

This program has been designed to provide you with the basic knowledge of hemoaccess. The most appropriate procedure and its selection will be discussed. You will learn how to approach and diagnose the failing grafts, the treatment of the thrombosed graft, and appropriate options for secondary procedures and revisions. Complications will be discussed in detail including those which are reversible and those which require removal. There will be a generous provision of time for participation in panel discussions.

For further information, please contact Linda Gallmon or Patricia Sarles, Office of Continuing Education, 185 South Orange Avenue, Newark, New Jersey 07103 (201) 456-5631/4267.

June 13, 1987

7TH ANNUAL ADVANCES IN GASTROENTEROLOGY

Bally's Park Place Hotel
Atlantic City, New Jersey

Sponsored by
the University of Pennsylvania
Gastrointestinal Department
and the Continuing Medical
Education Department
of the Underwood Memorial Hospital,
Woodbury, New Jersey

Accreditation: Category 1 credit offered

Information: Registration Supervisor
SLACK Incorporated
6900 Grove Road
Thorofare, New Jersey
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NEW YORK FERTILITY RESEARCH FOUNDATION, INC.

For the Investigation of
Problems of Human Infertility

The Foundation provides a complete diagnostic and consultation service for infertile couples. Investigations are conducted by well-known specialists in conjunction with consultants in the various fields of medicine related to infertility.

The Foundation is supported by an in-house modern laboratory equipped to do most tests required for diagnosis and treatment. Literature on request.

1430 Second Avenue, Suite 103
New York, N.Y. 10021
Phone: (212) 744-5500

8 **Obesity**
10:30-11:30 A.M.—St. Mary's Hospital, Passaic
(AMNJ)

8 **Office Management of Common Medical Issues**
12-4 P.M.—Kennedy Memorial Hospital, Stratford
(UMDNJ)

8 **Urinary Tract Infections**
1:30 P.M.—Essex County Hospital Center, Cedar Grove
(AMNJ)

10 **Current Clinical Concepts in Rheumatology/Immunology**
12:15-1:15 P.M.—Kennedy Memorial Hospital, Conf. Rm., Stratford
(UMDNJ)

13 **Industrial Medicine: Chemicals and Health**
7 P.M.—Wallkill Valley General Hospital, Sussex
(Wallkill Valley General Hospital and AMNJ)

14 **Hyperalimentation, Nutrition, and High Blood Pressure**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

14 **University Echo Club**
7:30 P.M.—University Hospital, Rm. H-349, Newark
(UMDNJ)

14 **Dermatology Meeting**
8-10 P.M.—Schering Corp., Kenilworth
(NJ Dermatological Society and AMNJ)

15 **Regional Urology Rounds**
7:00-8:30 A.M.—Robert Wood Johnson Medical School, Rm. 108-B, New Brunswick
(UMDNJ)

15 **Nonoperative Management of Chronic Back Pain**
9 A.M.—Warren Hospital, Phillipsburg
(Warren Hospital and AMNJ)

15 **Nutritional Support in the Oncology Patient**
1-2 P.M.—West Hudson Hospital, Kearny
(West Hudson Hospital and AMNJ)

15 **Interhospital Rheumatology Rounds**
4:30-6 P.M.—University Hospital, Rm. I355, Newark
(UMDNJ)

15 **Dermatology Conferences**
6-9 P.M.—Rutgers Community Health Plan
57 U.S. Hwy. 1, New Brunswick
(UMDNJ)

16 **To Be Announced**
5-6:30 P.M.—Somerset Medical Center, Somerville
(AMNJ and Somerset Medical Center)

16 **CME Series**
5-6:30 P.M.—Somerset Medical Center, Somerville
(Somerset Medical Center and AMNJ)

17 **Chronic Pain Management**
9 A.M.—St. Francis Medical Center, Trenton
(St. Francis Medical Center and AMNJ)

21 **CDS Prescribing Practices Legal/Illegal**
12 noon—St. Mary's Hospital, Orange
(St. Mary's Hospital and AMNJ)

21 **Salt-Wasting Nephropathy**
4-5 P.M.—Robert Wood Johnson Medical School, Rm. 393, New Brunswick
(UMDNJ)

21 **IVP Conference**
4-6 P.M.—New Jersey Medical School, Newark
(UMDNJ)

23 **Nutrition and High Blood Pressure**
11 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center and AMNJ)

23 **Visiting Professor Program**
4:00-5:00 P.M.—Saint Barnabas Medical Center, Livingston
(AMNJ and Saint Barnabas Medical Center)

24 **Medical Implications and Symptoms of Alcohol Withdrawal**
10:45 A.M.—Greystone Park Psychiatric Hospital
(Greystone Park Psychiatric Hospital and AMNJ)

29 **Annual William P. Burpeau Award Dinner**
6:30 P.M.—The Manor, West Orange
(Urology Section and AMNJ)

May

1 **Grand Rounds—Rehabilitation Medicine**
1:30-2:30 P.M.—New Jersey Medical School, Newark
(UMDNJ)

1 **Pseudomembranous Ulcerative Colitis**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

1 **Current Use of Plasmapheresis**
8 **Management and Treatment of the Adult Asthmatic**
15 **Hypo and Hyperkalemia**
22 **Pathology of AIDS in Children**
29 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

1 15 **Department of Medicine Grand Rounds**
9-10:00 A.M.—St. Francis Medical Center, Crean Hall
(St. Francis Medical Center and AMNJ)

1 8 15 22 29 **Pain Management Center**
8 A.M.—100 Bergen Street, Newark
(UMDNJ)

1 8 15 22 **Urology Basic Science Conference**
3-4 P.M.—New Jersey Medical School, Rm. C-600, Newark
(UMDNJ)

1 8 15 22 29 **Urology Grand Rounds**
4-6 P.M.—New Jersey Medical School, Newark
(UMDNJ)

4 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Science Center, Rm. 393, New Brunswick
(UMDNJ)

4 11 18 25 **University Hospital Tumor Conference**
8 A.M.—University Hospital, Newark
(UMDNJ)

5 **Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Lecture Hall 102, New Brunswick
(UMDNJ)

5 12 19 26 **Pulmonary Conference**
8-9 A.M.—University Hospital, Rm. H-349, Newark
(UMDNJ)

6 **Adrenal Diseases**
1:30 P.M.—Essex County Hospital Center, Cedar Grove
(AMNJ)

6 13 **Lecture Series 1986-1987**
10:30 A.M.-12 noon—Christ

ARE YOU MOVING?

If so, please send a change of address to *NEW JERSEY MEDICINE*, Medical Society of New Jersey, Two Princess Road, Lawrenceville, NJ 08648, at least six weeks before you move.

Name ____________________

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County ____________________

THE PHILADELPHIA HEART INSTITUTE

of Presbyterian-University of Pennsylvania Medical Center

CARDIOLOGY UPDATE . . .

is designed for the Physician and provides an intensive survey of the current status of Clinical Cardiology . . .

WEDNESDAY

APRIL 1, 1987
3:00 to 5:30 PM

DIAGNOSIS AND MANAGEMENT OF RHEUMATIC HEART DISEASE

MODERATOR: BERNARD SEGAL, M.D.

Clinical, Echocardiographic and Hemodynamic Findings in Mitral and Tricuspid Valve Disease	*Bernard Segal, M.D.*
Clinical, Echocardiographic and Hemodynamic Findings in Aortic Valve Disease	*Terry Langer, M.D.*
Case Presentations	*Steven Nierenberg, M.D.*
Indications and Results of Cardiac Surgery	*Grant Parr, M.D.*
Questions and Answers	*The Audience*

- No Registration Fee
- No Advance Registration Required
- CME Credits*

* * *Wine and Cheese Served Following Each Session* * *

Scheie Eye Institute Auditorium
Presbyterian-University of Pennsylvania
Medical Center
39th and Market Streets
Philadelphia, Pennsylvania

Parking Available (at discount rate.)

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*The University of Pennsylvania School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing education for physicians. The University of Pennsylvania School of Medicine designates this continuing medical activity for 22.5 credit hours of Category I of the Physicians Recognition Award of the AMA (2.5 credit hours each lecture).

20 Hospital, Jersey City
27 *(AMNJ)*

6 **New Concepts in the Management**
of Coronary Artery Disease
13 **Academy of Medicine Guest**
Lecture
20 **Newer Approaches to the**
27 **Treatment of Mild Hypertension**
12 noon-1 P.M.—Medical Education
Building, Rm. 102, New Brunswick
(UMDNJ)

6 **Continuing Education Series**
20 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant
Valley Way, West Orange
(UMDNJ and Kessler Institute for
Rehabilitation, Inc.)

7 **Allergy, Immunology, and**
14 **Infectious Diseases**
21 11:00 A.M.—Children's Hospital,
28 Newark
(UMDNJ and Children's Hospital)

7 **Blood Bank Conferences**
14 4 P.M.—University Hospital,
21 Rm. C-128, Newark
28 *(UMDNJ)*

7 **Urology Grand Rounds**
14 3-5 P.M.—Robert Wood Johnson
21 Medical School, Medical Education
28 Building, Rm. 108-A,
New Brunswick
(UMDNJ)

7 **Assessment and Differentiation of**
Acute vs Chronic Pain
11 A.M.-12 noon—St. Joseph's
Hospital and Medical Center,
Paterson
(St. Joseph's Hospital and Medical
Center)

8 **Pulmonary Embolus**
12 noon-1:15 P.M.—Bridgeton
Hospital
(Bridgeton Hospital and AMNJ)

8 **Sun Exposure, Skin Cancer**
Screening
12 noon—Warren Hospital,
Phillipsburg
(AMNJ)

12 **Menopause**
8:30 A.M.—Palisades General
Hospital, North Bergen
(AMNJ)

12 **NJ Dermatological Society**
6:30 P.M.—Chanticler, Millburn
(AMNJ)

12 **University Echo Club**
7:30 P.M.—University Hospital,
Rm. H-349, Newark
(UMDNJ)

14 **Current Clinical Concepts in**
Rheumatology/Immunology
12:15-1:15 P.M.—Kennedy Memorial
Hospital, Conference Rm.
(UMDNJ)

15 **Pancreatic Transplants and**
Genetic Engineering in Diabetes
12 noon-1:15 P.M.—Bridgeton
Hospital
(Bridgeton Hospital and AMNJ)

19 **Endocarditis**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

19 **Evaluation and Therapy of the**
Newly Discovered Hypertensive
4-5 P.M.—Robert Wood Johnson
Medical School, Rm. 393,
New Brunswick
(UMDNJ)

19 **IVP Conference**
4-6 P.M.—New Jersey Medical
School, Rm. C-600, Newark
(UMDNJ)

20 **Dermatology Conferences**
6-9 P.M.—Rutgers Community
Health Plan, 57 U.S. Highway #1,
New Brunswick
(UMDNJ)

20 **Interhospital Rheumatology**
Rounds
4:30-6 P.M.—University Hospital,
Rm. I-355, Newark
(UMDNJ)

20 **Regional Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson
Medical School, New Brunswick
(UMDNJ)

21 **20th Annual CME Series**
1986-1987
5-6:30 P.M.—Somerset Medical
Center, Auditorium, Somerville
(AMNJ and Somerset Medical
Center)

21 **Burns: Current Treatment**
2 P.M.—John E. Runnells Hospital,
Berkeley Heights
(AMNJ)

26 **The Spectrum of Epstein-Barr**
Virus Infections/State of the Art
8:30-10:30 A.M.—St. Joseph's
Hospital and Medical Center,
Johnson Auditorium, Paterson
(St. Joseph's Hospital and Medical
Center)

26 **Vaginal Discharge and P.I.D.**
8:30 A.M.—Palisades General
Hospital, North Bergen
(AMNJ)

28 **Visiting Professor Program**
4-5 P.M.—St. Barnabas Medical
Center, Classroom A, Livingston
(AMNJ and St. Barnabas Medical
Center)

NEUROLOGY/PSYCHIATRY

April

1 **Treatment of Anxiety and**
Depression in the Elderly
8:30-10 A.M.—Elizabeth General
Medical Center
(Elizabeth General Medical
Center)

1 **Grand Rounds**
10:30 A.M.-12 noon—New Jersey
Medical School, Newark
(UMDNJ)

2 **Neurology Grand Rounds**
9 3-5 P.M.—Robert Wood Johnson
17 Medical School, Rm. 108A, Medical
23 Ed. Bldg., New Brunswick
30 *(UMDNJ)*

2 **Case Seminars and Supervision**
16 **To Improve Psychotherapeutic**
Technique
8:00-10:00 A.M.—312 Harding Drive,
South Orange
(Advanced Psychiatric Study
Group and AMNJ)

2 **The Somatizer: Diagnosis and**
Treatment
9 **Hyperventilation Syndrome: The**
Brain and Heart Connection
16 **Psychiatric Aspects of Terrorism**
30 **Mental Retardation and the**
Elderly
12 noon-1 P.M.—Carrier Foundation,
Belle Mead
(Carrier Foundation)

9 **Psychiatric Lecture Series**
1:00 P.M.—Essex County Hospital
Center, Cedar Grove
(UMDNJ and Essex County
Hospital Center)

16 **Alzheimer's Disease**
2-3 P.M.—John E. Runnels Hospital
of Union County, Berkeley Heights
(NJ State Departments of Health
and Community Affairs and
AMNJ)

16 **Medical and Physical Aspects of**
Drugs and Alcohol Abuse
3-4 P.M.—Ancora Psychiatric
Hospital, Hammonton
(AMNJ)

17 **Anxiety Disorder: Diagnosis and**
Management
7-8 P.M.—Trenton Psychiatric
Hospital, Trenton
(Psychiatric Hospital and AMNJ)

22 **Women in 1987: Psychologically**
Free or Frantic?
All day—Carrier Foundation,
Belle Mead
(Carrier Foundation)

24 **Medical Implications and**
Symptoms of Alcohol Withdrawal
10:45-11:45 A.M.—Greystone Park
Psychiatric Hospital
(AMNJ)

28 **Suicide in Children and**
Adolescents
8:30-10:30—St. Joseph's Hospital
and Medical Center, Paterson
(St. Joseph's Hospital and Medical
Center)

May

6 **Grand Rounds**
10:30-12:00 P.M.—New Jersey
Medical School, Newark
(UMDNJ)

7 **Anorexia Nervosa/Bulimia**
14 **Speechmaking for the Clinician**
21 **Rights and Responsibilities of**
Treatment Decisions
12 noon-1 P.M.—Carrier
Foundation, Belle Mead
(Carrier Foundation)

7 **Case Seminars and Supervision**
21 **To Improve Psychotherapeutic**
Technique
8-10:00 P.M.—312 Harding Drive,
South Orange
(Advanced Psychiatric Study
Group and AMNJ)

8 **Lithium Toxicity Indications,**
Assessment
10:45 A.M.—Greystone Park
Psychiatric Hospital,
Greystone Park
(AMNJ)

14 **Psychiatric Lecture Series**
1 P.M.—Essex County Hospital,
Rm. 200, Cedar Grove
(Essex County Hospital Center
and UMDNJ)

20 **Double Trouble: Challenge of the**
Dually Diagnosed Chemical
Abuser

The Comprehensive Headache Center
at The Germantown Hospital and Medical Center
in cooperation with Temple University School of Medicine, Department of Neurology
Presents

Third Annual—
A HEADACHE SYMPOSIUM
New Advances in Headache Treatment

Moderator: **Stephen D. Silberstein, M.D.**
Chief, Neurology Section and Co-Director
Comprehensive Headache Center
The Germantown Hospital and Medical Center
Associate Professor of Neurology, Temple University

Saturday, April 4, 1987 8:30 A.M.–3:00 P.M.
at The Germantown Hospital and Medical Center

One Penn Boulevard, Philadelphia, Pa.
(adjacent to LaSalle University at the intersection
of Wister, Chew and Olney Avenues)

Featured Speakers and Topics:

Welcoming Remarks

Wallace McCune, M.D.
Professor of Medicine
Temple University School of Medicine
The Germantown Hospital and Medical Center

Psychological Aspects of Migraine

Fred D. Sheftell, M.D.
Director, New England Center for Headache
Clinical Assistant Professor,
Department of Psychiatry,
New York Medical College

Headache and the Pathophysiology of Migraine

James W. Lance, M.D.
Chairman, Department of Neurology,
Prince Henry and Prince of Wales Hospital;
Professor of Neurology, University of South Wales,
Sydney, Australia

Migraine in the Emergency Room

Elliott A. Schulman, M.D.
Attending Neurologist & Co-Director
Comprehensive Headache Center
The Germantown Hospital and Medical Center
Assistant Professor of Neurology,
Temple University

Evaluation and Management of Chronic Facial Pain

Raymond J. Maciewicz, M.D.
Assistant Professor of Neurology and
NeuroScience,
Harvard Medical School
Assistant Neurologist,
Massachusetts General Hospital

Additional participants will include:

Gregory J. Tramuta, M.D., Psychiatrist and Co-Director, The Comprehensive Headache Center; Clinical Assistant Professor of Psychiatry, Temple University.

Ronald S. Kaiser, Ph.D., Clinical Psychologist and Co-Director, The Comprehensive Headache Center; Assistant Professor of Psychology, Hahnemann University.

Joseph P. Primavera III, M.A., Clinical Psychologist and Co-Director, The Comprehensive Headache Center; Vocational Services Director of The Rehabilitation Diagnostic Center, The Germantown Hospital and Medical Center.

A roundtable discussion will include controversial topics in headache management and difficult cases.

*Plan to bring your difficult cases for discussion.

Credit:

4.5 credit hours in Category I credit provided it is completed as designed. A.A.F.P. prescribed credits. AOA credit.

Registration Fee:

$15.00 includes coffee breaks, lunch and registration material.

Please make checks payable to:
The Germantown Hospital and Medical Center
and send by March 30, 1987 to:

The Comprehensive Headache Center
The Germantown Hospital and Medical Center
One Penn Boulevard, Philadelphia, PA 19144

COMPREHENSIVE
HEADACHE CENTER

All day—Carrier Foundation, Belle Mead.
(Carrier Foundation)

PATHOLOGY

April

1 **Pathology Grand Rounds**
8 1:30-5:30 P.M.—NJ Medical School,
15 Newark
22 *(UMDNJ)*
29

1 **Experimental Pathology Seminar**
15 12:00 noon—NJ Medical School,
29 Newark
(UMDNJ)

2 **Pathology/Radiology/Orthopedic**
9 **Conference**
16 8-9 A.M.—University Hospital,
23 Newark
30 *(UMDNJ)*

7 **Anatomic Pathology Specialty**
14 **Conference**
21 5:15-6:00—NJ Medical School,
28 C-555, Newark
(UMDNJ)

7 **Pathology-G.I. Conference**
14 3 P.M.—University Hospital, E-155,
21 Newark
28 *(UMDNJ)*

8 **Neuropathology Conference**
22 10:30-12:00 noon—NJ Medical School, Newark
(UMDNJ)

14 **Renal Biopsy Conferences**
12:30-2 P.M.—Barnert Memorial Hospital Center, Paterson
(AMNJ and Barnert Memorial Hospital Center)

16 **Renal Pathology Conference**
4 P.M.—University Hospital, Rm. E-155, Newark
(UMDNJ)

May

1 **Pathology/Radiology/Orthopedic Conference**
8-9 A.M.—University Hospital, H Level, Conference Rm., Newark
(UMDNJ)

5 **Anatomic Pathology Specialty**
12 **Conference**
19 5:15-6 P.M.—New Jersey Medical
26 School, Rm. C-555, Newark
(UMDNJ)

5 **Pathology—GI Conference**
12 3 P.M.—University Hospital,
19 Rm. E-155, Newark
26 *(UMDNJ)*

6 **Experimental Pathology Seminar**
20 12 P.M.—New Jersey Medical School, Newark
(UMDNJ)

6 **Pathology Grand Rounds**
13 1:30-5:30 P.M.—New Jersey Medical
20 School, Newark
27 *(UMDNJ)*

9 **NJ Society Pathologists Annual Meeting**
7:45 A.M.-4:45 P.M.—Somerset Marriott Hotel, Somerset
(AMNJ)

12 **Renal Biopsy Conference**
12:30-2 P.M.—Barnert Memorial Hospital Center, Conference Rm., Paterson
(AMNJ and Barnert Memorial Hospital Center)

13 **Neuropathology Conference**
27 10:30-12:00 noon—New Jersey Medical School, Newark
(UMDNJ)

21 **Renal Pathology Conference**
4 P.M.—University Hospital, Rm. E-155, Newark
(UMDNJ)

PEDIATRICS

April

3 **Children's Pediatric Surgical**
10 **Conference**
17 8:00 A.M.—United Hospitals Medical
24 Center, Rm. A, Annex Bldg., Newark
(Children's Hospital of NJ and UMDNJ)

3 **Advances in Pediatrics**
10 9:30-10:30 A.M.—NJMS, MSB,
17 Rm. B-610, Newark
24 *(UMDNJ)*

10 **Cardiac Arrhythmias in Children**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

21 **Rehabilitation of the Pediatric Head Trauma Patient**
8 A.M.-4:30 P.M.—Woodbridge Hilton, Iselin
(Children's Specialized Hospital and AMNJ)

May

1 **Advances in Pediatrics**
8 9:30-10:30 A.M.—New Jersey
15 Medical School, Medical Science
22 Building, Rm. B-610, Newark
29 *(UMDNJ)*

1 **Children's Pediatric Surgical**
8 **Conference**
15 8 A.M.—United Hospitals Medical
22 Center, Annex Building, Conference Rm. A, Newark
(Children's Hospital of New Jersey and UMDNJ)

8 **Controversies in Pediatrics**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

RADIOLOGY

April

2 **Pathology/Radiology/Orthopedic**
9 **Conference**
16 8-9 A.M.—University Hospital,
23 Newark
30 *(UMDNJ)*

8 **Radiology Grand Rounds**
2 P.M.—University Hospital, Newark
(UMDNJ)

10 **Nuclear Hazards**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

28 **MRI Update**
8-10 P.M.—Englewood Club, Englewood
(The Englewood Surgical Society and AMNJ)

May

1 **Pathology/Radiology/Orthopedic**
8 **Conference**
15 8-9 A.M.—University Hospital,

221st MSNJ ANNUAL MEETING
Americana Host Farm Resort

Wednesday, April 29, 1987

3:30 P.M.—Board of Trustees' Meeting

Thursday, April 30, 1987

9:00 A.M.—Registration Opens
9:00 A.M.—Message Center Opens
2:00 P.M.—House of Delegates
4:00 P.M.—Reference Committees

Friday, May 1, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
9:00 A.M.—House of Delegates (election)
12:00 NOON—Golden Merit Award Ceremony followed by Reception
2:30 P.M.—Reference Committees
5:00 P.M.—JEMPAC Political Forum
5:45 P.M.—JEMPAC Wine and Cheese Reception

Saturday, May 2, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
8:30 A.M.—House of Delegates
1:30 P.M.—House of Delegates
6:00 P.M.—Inaugural Reception followed by Inaugural Dinner

Sunday, May 3, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center Opens
8:30 A.M.—General Session: "The Impact of Health Care Rationing on Physician Autonomy—The Cases of Generic Substitution and DRGs"
1:00 P.M.—Board of Trustees' Meeting

you're invited...

CLINICAL DECISION-MAKING IN GERIATRICS

A three-day course to be held at Mount Sinai Medical Center, New York City, April 6-8, 1987

Sponsored by the Department of Geriatrics and Adult Development, The Page and William Black Postgraduate School of Medicine of the Mount Sinai Medical Center. Course Directors: David T. Lowenthal, MD, PhD, and Barbara Katzeff, MD.

Monday, April 6: Lectures will be presented on general aspects of clinical geriatrics, patient evaluation, and special drug therapy considerations. Attention will be directed to the evaluation and treatment of peripheral vascular disease and problems such as ischemic heart disease, hypertension, dizziness and syncope, and stroke. The closing session will feature a special lecture on the Goteburg Longitudinal Study.

Tuesday, April 7: This segment will concentrate on musculoskeletal problems—pain, hip fracture, and osteoporosis; nutrition in the elderly; various infectious diseases; and use of antibiotics.

Wednesday, April 8: The final day will begin with lectures on the central nervous system—brain function, dementia, depression, and pharmacologic management of Alzheimer's disease.

Special attention will be given to the significant role played by allied health professionals. Experts will also delve into matters such as nursing home placement, legal issues, and financing.

The course will conclude with the annual Mount Sinai Medical Center Alzheimer's Disease Update.

Supported through a grant-in-aid by the Sandoz Pharmaceuticals Corporation.

For registration and further information, contact Kenneth Smith, PhD, at The Page and William Black Postgraduate School of Medicine. Phone: (212) 650-7991.

MOUNT SINAI
MSM
SCHOOL OF MEDICINE

INST-387-1

22 Conference Rm., Newark
29 *(UMDNJ)*

13 **Radiology Grand Rounds**
27 2 P.M.—University Hospital,
Newark
(UMDNJ)

21 **Update on Interventional Radiology**
7:30 P.M.—St. Barnabas Medical
Center, Livingston
(AMNJ)

SURGERY

April

1 **Trauma Conference**
8 8:00 A.M.—University Hospital,
15 Newark
22 *(UMDNJ)*
29

1 **Grand Rounds**
10:30-12:00 P.M.—New Jersey
Medical School, Newark
(UMDNJ)

1 **Surgical Grand Rounds**
8 8:30-10 A.M.—Robert Wood Johnson
15 Medical School,
22 Rm. 102, New Brunswick
29 *(UMDNJ)*

2 **Management of Abdominal Emergencies**
11:00 A.M.—St. Joseph's Hospital
and Medical Center, Paterson
(AMNJ)

3 **Cancer Research Colloquium**
10 12-1:15 P.M.—New Jersey Medical
17 School, MSB Bldg., G-506B, Newark
24 *(UMDNJ)*

4 **Mortality and Morbidity**
11 **Conference**
18 8:30-9:30 A.M.—NJ Medical School,
25 MSB, New Brunswick
(UMDNJ)

6 **Surgical Grand Rounds**
13 4:30-6 P.M.—NJ Medical School,
20 Newark
27 *(UMDNJ)*

7 **Surgery-Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson
Medical School, Rm. 102,
New Brunswick
(UMDNJ)

24 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive,
West Orange
(UMDNJ)

May

1 **Cancer Research Colloquium**
8 12-1:15 P.M.—Medical Science
15 Building, Rm. G-506B, Newark
22 *(UMDNJ)*
29

2 **Mortality and Morbidity**
9 **Conference**
16 8:30-9:30 A.M.—Medical Science
23 Building, Rm. B-610, Newark
30 *(UMDNJ)*

4 **Surgical Grand**
11 **Rounds/Distinguished Lecture**
18 **Series**
25 4:30-6 P.M.—New Jersey Medical
School, Newark
(UMDNJ)

6 **Surgical Grand Rounds**
7 8:30-10 A.M.—Robert Wood Johnson
13 Medical School, Lecture Hall,
20 Rm. 102, New Brunswick
(UMDNJ)

6 **Trauma Conference**
13 8 A.M.—University Hospital, Newark
20 *(UMDNJ)*
27

29 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive,
West Orange
(UMDNJ)

SURGICAL SPECIALTIES

April

2 **Vascular Surgery Conference**
9 **Rounds**
16 4-5 P.M.—Robert Wood Johnson
23 Medical School, Medical Ed. Bldg.,
30 New Brunswick
(UMDNJ)

6 **Orthopedic Grand Rounds and**
13 **Lecture Series**
20 6-8 P.M.—NJ Medical School, MSB,
27 B-556, Newark
(UMDNJ)

15 **Grand Rounds in Ophthalmology**
7-9 P.M.—Eye Institute of NJ, Newark
(UMDNJ and Affiliated Eye Residency Program)

23 **Distinguished Lecturer Series—Neurosurgery**
4-5:30—University Hospital,
Rm. E-343, Newark
(UMDNJ)

May

4 **Orthopaedic Grand Rounds and**
11 **Lecture Series**
18 6-8 P.M.—New Jersey Medical
25 School, Medical Science Building,
Rm. B-556, Newark
(UMDNJ)

7 **Vascular Surgery Conference**
14 **Rounds**
21 4-5 P.M.—Robert Wood Johnson
28 Medical School, Medical Education
Building, New Brunswick
(UMDNJ)

20 **Grand Rounds in Ophthalmology**
7-9 P.M.—Eye Institute of NJ,
Newark
(UMDNJ, Eye Res. Prog.)

26 **Advances in Eye Surgery**
8-10 P.M.—The Englewood Club,
Englewood
(The Englewood Surgical Society and AMNJ)

28 **Distinguished Lecturer Series—Neurosurgery**
4-5:30 P.M.—University Hospital,
Rm. E-343, Newark
(UMDNJ)

MISCELLANEOUS

April

1 **Cost Containment**
10:30 A.M.—St. Mary's Hospital,
Passaic
(AMNJ)

3 **Changes in Health Care Delivery and Financing**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

May

1 **Medical Aspects of Nuclear War**
12 noon—St. Mary's Hospital,
Orange
(AMNJ)

13 **Office Management of Common Medical Issues**
12-4 P.M.—Kennedy Memorial
Hospital, Stratford
(UMDNJ)

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JOSEPH INZINNA, M.D., MEDICAL DIRECTOR

LETTERS TO THE EDITOR

HMO-IPA Proposal; No Smoking; Rate Relief Commission

HMO-IPA Proposal

November 24, 1986

Dear Dr. Krosnick:

I read with interest the eloquent essay by Dr. Albert Minzter in the November 1986 issue of *NEW JERSEY MEDICINE.*

In this article, he has clearly defined the problems raised by the concept of a "freestanding IPA" sponsored by the Medical Society of New Jersey. He also cogently points out the marked disadvantages of the entire HMO-IPA system.

Happily, the Medical Society of New Jersey did reject the proposal of a Medical Society-sponsored statewide IPA. The feasibility study commissioned by the Medical Society of New Jersey concluded that such an IPA would be ill-advised, mainly from a financial point of view.

Unfortunately, the basic fallacies in such a system were not emphasized. It is notable that at the Annual Meeting of the Union County Medical Society, held on September 17, 1986, the concept of a statewide Medical Society-sponsored IPA was overwhelmingly rejected before the feasibility study report was presented.

It is the concept of the HMO-IPA system, not merely the financial feasibility, that should be considered and rejected by the physicians in this state.

(signed) Stephen M. Sachs, M.D.

No Smoking

December 11, 1986

Dear Dr. Krosnick:

No. We should not encourage Congress to legislate away our rights. Banning advertising of a legal product or service is a major step in whittling away our American freedoms. If a substance such as nicotine is addictive and lethal, then it should be outlawed or at least highly controlled. But until that day comes, we should not look for a cure that would be worse than the disease.

Don't get me wrong. I abhor this situation in which millions of people suffer and die every year unnecessarily.

But, there is a better way, within our present legal system—swifter, surer, more effective, and one in which each and every doctor can help to bring this death wielding tobacco industry to its knees. One way would be for each physician to find the best examples of patients within his or her practice who became addicted to nicotine and who died because of smoking. The physician would send those stories to a central clearing house along with a check for two dollars. One of those dollars would go into a legal defense fund to buy the "hired guns" to sue the tobacco industry for manslaughter (with damages, of course).

The other dollar would go into a kitty to be awarded to the physician who submitted the winning entry (well, if that's too tacky, I suppose you could elect to give both bucks to the lawyers).

(signed) Robert G. Jarmon, M.D.

Rate Relief Commission

January 5, 1987

Dear Dr. Krosnick:

I refer to a letter written by Charles Harris in your December issue on page 843. I was disheartened to learn that the House of Delegates rejected a resolution to establish a rate relief commission for physicians. I was even more disheartened to learn of our apparent indifference to the plight of Massachusetts physicians and our unwillingness to put together a slush fund to counteract the similar law that is being put forward here by Doyle and Karcher. Judging from the experience of HMOs in California, I concur with Dr. Harris that money and plans for a state society HMO should be diverted immediately toward a political action to defeat Doyle which already has been initiated by Ocean County physicians and in addition a slush fund to augment the legal battle against the mandatory Medicare acceptance bill.

If our Medical Society is going to remain a viable entity that represents the interests of physicians and maintenance of quality health care, it must take a leadership role in activities that affect all of our futures.

(signed) Robert Dennis, M.D.

Advances in Plastic and Reconstructive Surgery; Atlas of Female Infertility Surgery; Current Pediatric Therapy; General Ophthalmology; 1986 Year Book of Plastic and Reconstructive Surgery

Advances in Plastic and Reconstructive Surgery, Volume 3

Mutaz B. Habal, M.D., (ed). Chicago, IL, Year Book Medical Publishers, Inc., 1987. Pp. 315. Illustrated.

This book is the third in an annual series to fill the information needs of the practicing specialist. It contains nine chapters, starting with "Reflections on Advances in Plastic Surgery" which is a good and short historical review of recent developments. The chapter, "Fasciocutaneous Flaps," details the anatomy of the flap and discusses the perforators as well as the flaps located on the trunk, upper arm, forearm, thigh, lower leg, and foot. The authors also classify their flaps in types A to D based on their vascular anatomy. The chapter, "Nipple-Areolar Reconstruction," discusses the current methods of obtaining most satisfactory results as a final and finishing touch of the total breast reconstruction including tattoo to obtain the most satisfactory color. In the chapter, "Suction Lipectomy Revisited," the history of the development of this new modality is highlighted followed by discussions of the different techniques and their differences and/or similarities. The preoperative and postoperative care briefly is discussed with enough time devoted to the technical variations pertaining to the regions of suction. The chapter, "Rehabilitation of the Cleft Lip Nose," is a review of the current techniques of reconstruction. The chapter, "Bone Grafting and Bone Substitutes," contains a discussion of several potential donor sites with emphasis on the cranial bone as the most recently developed donor. An excellent discussion of the healing of bone grafts and their functional adaptation and biological predeterminism is included. An update on diagnosis and management of hemangiomas vascular malformation is the next subject of discussion. A very timely chapter is "Scientific Basis of Skin Staple Closure." It includes the biology of healing and infection and the latest innovations in stapler design. The final chapter is an update on the treatment of male pattern baldness ranging from the different types of grafts to the use of skin, i.e. scalp expanders.

In my opinion, this recent volume, on *Advances in Plastic and Reconstructive Surgery*, is a worthwhile addition to any library and worthwhile reading for the practicing specialist who wants to remain current.

Robby Meijer, M.D.

Atlas of Female Infertility Surgery

Robert B. Hunt, M.D. Chicago, IL, Year Book Medical Publishers, 1986. Pp. 415. Illustrated.

This atlas contains most of the material found in microsurgical courses in female infertility. It is intended to be a resource text to learn specific operations and to know when to purchase surgical instruments and sutures.

In addition to the book being well written, the use of a professional medical artist and photographer greatly adds to its value. So much understanding of the surgical techniques depends on clear illustrations and photographs that their need to be excellent cannot be overstated.

This text is recommended for all students of female infertility surgery who want to improve their skills and learn to handle tissue gently. It would be of interest to gynecological surgeons who wish to improve their standard surgical techniques. It would make a great present for graduating residents or fellows!

Gerard F. Hansen, M.D.

Current Pediatric Therapy, Volume 12

Sydney S. Gellis, M.D., and Benjamin M. Kagan, M.D., (eds). Philadelphia, PA, W.B. Saunders Co., 1986. Pp. 790. ($60)

With two editors of such stature, it is most unlikely this book would fail to at least meet the standards set by the previous editions. To enable them to produce the text, Drs. Gellis and Kagan had the assistance of over 350 contributors—all of whom are authorities in their subspecialties. The edition incorporates all the significant advances of the past two years in the management of ill children.

There are 24 chapters covering all the body tracts and systems. The range is quite extensive and the following should give the reader a flavor of the contents: megaloblastic anemia by Philip Lanzkowsky; neurogenic bladder by Kevin A. Burbige and Terry W. Hensle; plague by Heinz F. Eichenwald; and fluid and electrolyte therapy by Lewis A. Barness.

Considering the large number of contributors, the articles are consistently well written and well edited. The articles come right to the point and are packed with information. The section on parasitic infection especially is outstanding with tables of drugs listing the adult and pediatric dosages as well as a listing of the adverse effects of each drug.

It makes for pleasant reading and provides an excellent review. Considering the cost for a dinner for two in this day and age, the book is a bargain.

Albert P. Rosen, M.D.

General Ophthalmology

Daniel Vaughan, M.D., and Taylor Asbury, M.D. East Norwalk, CT, Appleton-Century-Crofts, 1986. Pp. 414. Illustrated. ($22)

This is the 11th edition of a justifiably popular textbook. As were its predecessors, this text is written in a clear, concise fashion and is surprisingly complete for a book of its brevity. Abundantly illustrated with line drawings and photographs, the book is thoroughly up to date.

This volume is of value, not only to the younger student and resident but also to the older practitioner. It makes an easily available quick reference for refreshing the memory and stimulating the reasoning process for diagnosis and treatment.

The sections on the conjunctiva and cornea are especially good as are those on neuro-ophthalmology and strabismus. The closing chapter on commonly used medications is particularly useful.

I would recommend this soft-covered volume for ophthalmologists.

S. Jerome Greenfield, M.D.

1986 Year Book of Plastic and Reconstructive Surgery

Frederick J. McCoy, M.D., (ed). Chicago, IL, Year Book Medical Publishers, Inc., 1986. Pp. 349. Illustrated.

The 1986 Year Book of Plastic and Reconstructive Surgery edited by Dr. McCoy, covers a wide array of subjects collected after reviewing 58 foreign and domestic journals up to June 1985. It contains chapters on: congenital anomalies, neoplastic inflammatory and degenerative diseases, trauma, esthetic surgery, breast, flaps, grafts, and transplants, and general topics.

The editorial comments are excellent and to the point. I consider this a worthwhile addition to anyone's library who wants to keep abreast of the everchanging aspects of plastic and reconstructive surgery.

Robby Meijer, M.D.

1987 MSNJ MEMBERSHIP DIRECTORY

The 1987 *Membership Directory* of the Medical Society of New Jersey is available. The latest issue contains all vital statistics on the membership of the Medical Society of New Jersey, as well as information on most hospitals in the Garden State.

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OBITUARIES

Drs. Copleman; Edwards; Hewson; Horowitz; Marvin; McWhorter; O'Hare; Peterson; Royer; Scott; Selecky; Soefer; Thompson

Dr. Hyman B. Copleman

A New Brunswick surgeon, Hyman Benjamin Copleman, M.D., died on October 11, 1986, at the age of 76. A native of New Jersey, Dr. Copleman was graduated from Rush Medical College, Chicago, Illinois, in 1933. He was a member of our Middlesex County component and of the American Medical Association. Dr. Copleman was a Fellow of the American College of Surgeons, of the American College of Sports Medicine, and of the International College of Surgeons. He had been affiliated with St. Peter's Medical Center and Middlesex General Hospital, both in New Brunswick. During World War II, Dr. Copleman served in the medical corps of the United States Army, attaining the rank of major. In 1983, Dr. Copleman was a recipient of MSNJ's Golden Award in recognition of his 50 years as a physician.

Dr. Lena F. Edwards

Credited with delivering more babies free of charge in Hudson County than most people have hairs on their head, Lena Frances Edwards, M.D., died at her home in Lakewood on December 3, 1986, at the remarkable age of 86. Born in Washington, D.C., daughter of a dentist, Dr. Edwards was graduated from Howard University School of Medicine, in that city, in 1924. She established a practice in obstetrics and gynecology in Jersey City which she shared with her physician husband, Dr. L. Keith Madison. In 1960, Dr. Edwards traveled to Texas where she cared for indigent migrant workers and their families, and finally managed to raise enough money to open a 25-bed hospital. Dr. Edwards retired to Lakewood in 1972, and devoted her time to improving the lot of Ocean County's senior citizens. In 1979, she was the recipient of the Academy of Medicine of New Jersey's Edward J. Ill Award for extraordinary service to the medical profession. Dr. Edwards also received the highest award given by the American Cancer Society, the Bronze Medal. She received a number of other awards, among them the Freedom Medal in 1964 (the nation's highest award for peacetime service to the United States). Dr. Edwards was one of New Jersey's first black female physicians, who served as assistant professor of obstetrics and gynecology at Howard University for many years. She was a Diplomate in obstetrics and gynecology; and a Fellow of the American College of Obstetricians and Gynecologists, and of the International College of Surgeons. In 1974, MSNJ bestowed on Dr. Edwards its Golden Merit Award. At the time of her death, Dr. Edwards was a member of our Hudson County component.

Dr. George F. Hewson

George Francis Hewson, M.D., died in Morristown Memorial Hospital on October 12, 1986, at the age of 77. A surgeon, Dr. Hewson had practiced vascular surgery in Marco Island, Florida, for the past 15 years, retiring just three months ago. Prior to that move, he had maintained an office in Newark for 25 years. Born in Newark, Dr. Hewson received his medical degree from the University of St. Louis, Missouri, in 1933. He became a member of our Essex County component and of the American Medical Association. Dr. Hewson was a Diplomate in surgery, and a Fellow of the American College of Surgeons. Prior to his move to Florida, he had been affiliated with Presbyterian and City Hospitals, Newark, St. Mary's Hospital, Orange, and Saint Barnabas Medical Center, Livingston. In Florida, he was on the staff at the Community Hospital, Naples. Dr. Hewson served in the United States Navy during World War II, emerging with the rank of lieutenant commander. In 1983, honoring his 50 years in medicine, MSNJ bestowed its Golden Merit Award upon Dr. Hewson. His son, George F. Hewson, Jr., M.D., also is an affiliate member of the Medical Society of New Jersey.

Dr. Alexander S. Horowitz

A Union City ophthalmologist, Alexander Sam Horowitz, M.D., died in August of this year. A native of Jersey City, born in 1909, Dr. Horowitz was graduated from Dalhousie University Faculty of Medicine, Halifax, Nova Scotia, Canada, in 1937. He was a member of our Hudson County component. Dr. Horowitz was board certified in his specialty, and had been affiliated with St. Mary's Hospital, Hoboken. During World War II, he served in the medical corps of the Army of the United States, attaining the rank of captain.

Dr. Dorothy H. Marvin

A New Brunswick obstetrician and gynecologist, Dorothy Hope Marvin, M.D., died on October 18, 1986, at the venerable age of 84. A native of Cleveland, Ohio, Dr. Marvin was graduated from Columbia University's College of Physicians and Surgeons, New York, in 1926. She was a member of our Middlesex County component and of the American Medical Association. Dr. Marvin was a Fellow of the American College of Obstetricians and Gynecologists, and had been affiliated with Middlesex General Hospital, New Brunswick. In 1978, she was a recipient of MSNJ's Golden Merit Award in recognition of 50 years as a physician.

Dr. John E. McWhorter

A former president of the Bergen County Medical Society, John English McWhorter, M.D., died on November 8, 1986, at the age of 74. A native of New York City, Dr. McWhorter was graduated from Columbia University's College of Physicians and Surgeons, New York City, in

1940. An internist in Englewood for over 30 years, he had been affiliated with Englewood Hospital and Bergen Pines County Hospital, Paramus. Dr. McWhorter was a member of the American Medical Association and had been a trustee of the Bergen County chapter of the American Heart Association. During World War II, he served in the medical corps of the United States Army in the European Theater; he was awarded the Bronze Star, and had been company commander and battalion surgeon with the Fifth Armored Division.

Dr. William J. O'Hare

A practitioner of general medicine, William John O'Hare, M.D., died on October 13, 1986, at the early age of 64. Failing vision caused an early retirement in 1984, but prior to that time, Dr. O'Hare had maintained an office in Ramsey for 18 years. Born in New York City, he was graduated from Cornell University Medical College in 1950. Dr. O'Hare was a member of our Bergen County component and of the American Medical Association. He had been medical director for the Ford Motor Company, Mahwah, and had been affiliated with The Valley Hospital, Ridgewood.

Dr. Walter R. Peterson

Walter Robert Peterson, M.D., an orthopedic surgeon in the Trenton area for over 30 years, died on December 1, 1986, at Mercer Medical Center, Trenton, at the venerable age of 86. Born in Washington State, Dr. Peterson received his medical degree from Washington University Medical School, St. Louis, Missouri, in 1926. He was a member of our Mercer County component (serving one term as their president) and of the American Medical Association. Dr. Peterson was an instructor of orthopedic surgery at the University of Pennsylvania Hospital for 25 years. He had been chief of orthopedic surgery at Mercer Medical Center, and upon his retirement continued as an orthopedic consultant. Dr. Peterson was a Diplomate in surgery; in 1976, he was a recipient of MSNJ's Golden Award, honoring his 50 years in medicine.

Dr. Charles C. Royer

A Montclair radiologist, Charles Cost Royer, M.D., died on October 18, 1986. Born in 1921, at Bellefontaine, Ohio, Dr. Royer was graduated from Harvard Medical School, Boston, in 1946. He was a member of our Essex County component and of the American Medical Association. Dr. Royer was a Diplomate in radiology, and had been affiliated with The Mountainside Hospital, Montclair. During World War II, he served in the medical department of the United States Air Force, emerging with the rank of captain.

Dr. Frederick J. Scott

A family physician for over 50 years in Franklin, Frederick John Scott, M.D., died on November 11, 1986, in Newton Nursing Home, at the advanced age of 88. Born in Barrie, Ontario, Canada, Dr. Scott received his medical degree from the University of Toronto, Canada, in 1924. He had been a member of our Sussex County component and of the American Medical Association. Prior to his retirement in 1975, Dr. Scott had delivered over 2,000 babies in the Franklin area. He also served as school physician for the Franklin, Hardyston, and Ogdensburg school systems. Dr. Scott had been affiliated with Franklin Hospital and Wallkill Valley Hospital, Franklin. In 1974, honoring his 50 years as a physician, Dr. Scott received MSNJ's Golden Merit Award.

Dr. Medard A. Selecky

An Allentown internist whose ill health forced him into early retirement, Medard Anthony Selecky, M.D., died in Helene Fuld Medical Center, Trenton, on November 23, 1986, at only 63 years of age. Born in Glen Lyon, Pennsylvania, Dr. Selecky was graduated from the University of Pennsylvania's School of Medicine in 1947. He had been a member of our Mercer County component and of the American Medical Association. Dr. Selecky had been affiliated with Mercer Medical Center, St. Francis Medical Center, and Hamilton Hospital, all in Trenton. He was a Fellow of the American Academy of Family Practice. Dr. Selecky served as school physician for the Freehold Region school district for over 38 years.

Dr. Ellen F. Soefer

Seriously injured in an automobile accident while returning to her area from a meeting at the Medical Society of New Jersey, Lawrenceville, Ellen Frances Soefer, M.D., died on November 7, 1986, at Freehold Area Hospital, at only 37 years of age. Born in Philadelphia, Dr. Soefer was graduated from Temple University School of Medicine in 1974. Upon completion of her internship in Pittsburgh and residencies in Philadelphia and Texas, she became a member of our Monmouth County component. Dr. Soefer, whose specialty was pediatric and adolescent medicine, was board certified. She was a clinical assistant professor in pediatrics at Temple University and affiliated with Riverside Medical Center, Red Bank. At its Interim Meeting on Sunday, November 9, the House of Delegates of the Medical Society of New Jersey observed a moment of silence in memory of their deceased colleague.

Dr. Edward C. Thompson

A Paterson family physician for over 30 years, Edward Charles Thompson, M.D., died on September 21, 1986. Born in 1913, and a native of Paterson, Dr. Thompson was graduated from Columbia University's College of Physicians and Surgeons, New York, in 1938. He had been a member of our Passaic County component, later switching to Sussex County. Dr. Thompson also was a member of the American Medical Association. During World War II, he served in the medical corps of the Army of the United States, attaining the rank of captain. Dr. Thompson had been affiliated with St. Joseph's Hospital and Medical Center, Paterson.

AUTHOR INFORMATION

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CONTENT

The educational content of each issue appears as scientific articles, based on research, original concepts relative to epidemiology of disease, and treatment methodology; case reports based on unusual clinical experiences; review articles; clinical notes, succinct items on some aspect or new observation or technique of a case experience; and special articles, which include evaluations, policy and position papers, and reviews of nonscientific subjects. Other topics include commentary (critical narration); medical history; therapeutic drug information; pediatric briefs; nutrition update; and an opinion column. Editorials are prepared by the Editor and by guest contributors on timely and relevant subjects; editorials are the responsibility of the author. The Doctors' Notebook section contains organizational, informational, and administrative items from MSNJ and from the community. Letters to the Editor and book reviews are welcome and will be published as space permits. The principal aim in the preparation of a contribution should be relevance to diagnosis and treatment and to education of patients and professionals. Preference will be given to professional authors from New Jersey and to out-of-state lecturers who submit a suitable manuscript based on a presentation made in New Jersey.

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The **title page** should include the full name, degrees, and affiliations of all authors, and the name and address of the author to whom reprint requests should be sent.

The author should submit a 40-word **abstract** to be used at the beginning of the article.

Tables must be typewritten and double-spaced on separate 8½" by 11" sheets, with a title and number. Symbols for units should be confined to column headings, and abbreviations, properly explained, should be kept to a minimum.

Illustrations should be professional quality, black-and-white glossy prints. The name of the author, figure number, and the top of the figure should be noted on a label attached to the back of each illustration. Where photographs of patients are used, the subjects should not be identifiable or publication permission, signed by the subject or responsible person, must be included with the photograph. Material taken from other publications must give credit to the source; written permission for republication from the original publisher must be submitted. The cost of color photographs must be borne by the author.

Generic names should be used with proprietary names indicated parenthetically or as a footnote with the first use of the generic name. Proprietary names of devices should be indicated by the registration symbol—®.

The **summary** of the article should not exceed 250 words; it should contain only essential facts.

References should not exceed 35 citations except in review articles, and should be cited consecutively in the text by numbers in parentheses at the end of the sentence. The reference list should be typewritten and double-spaced on separate 8½" by 11" sheets in the numerical order in which they are first cited in the text. The style of reference is that of *Index Medicus:*

1. Goldwyn RM: Subcutaneous mastectomy. *J Med Soc NJ* 74:1050-1052, 1977.
2. Dixon WJ, Massey FJ: *Introduction to Statistical Analysis.* New York, NY, McGraw-Hill, 1969, pp. 42-48.

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Receipt of each manuscript will be acknowledged and a copy delivered to the Editor who refers the paper to one or more members of the Editorial Board. The final decision is reserved for the Editor. No direct contact between the reviewers and the authors will be permitted, but authors will be informed of the reviewers' comments. The publication lag for original articles may be six months or more. Galley proofs will be submitted to the author for correction of typographical errors.

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Real Estate

See Page 231

Personnel

**See Pages 228, 229
230, 231**

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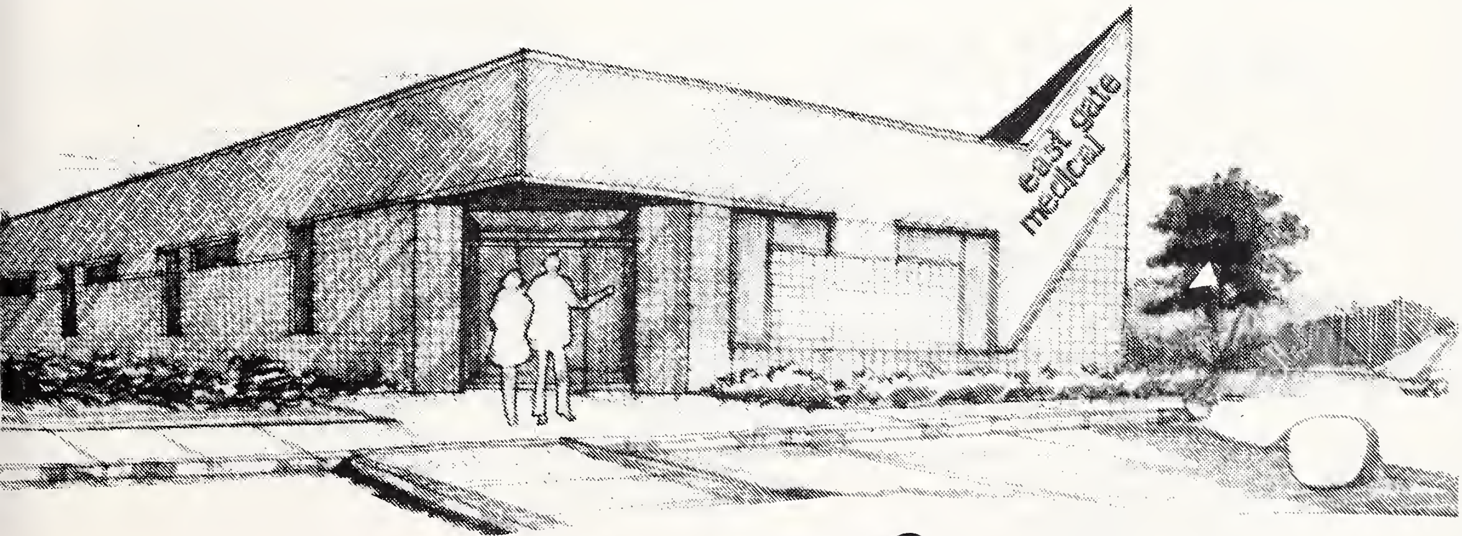

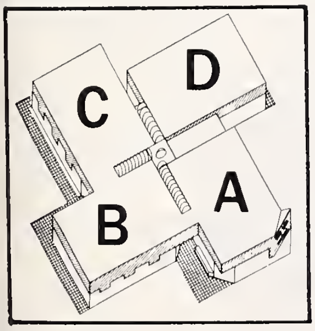

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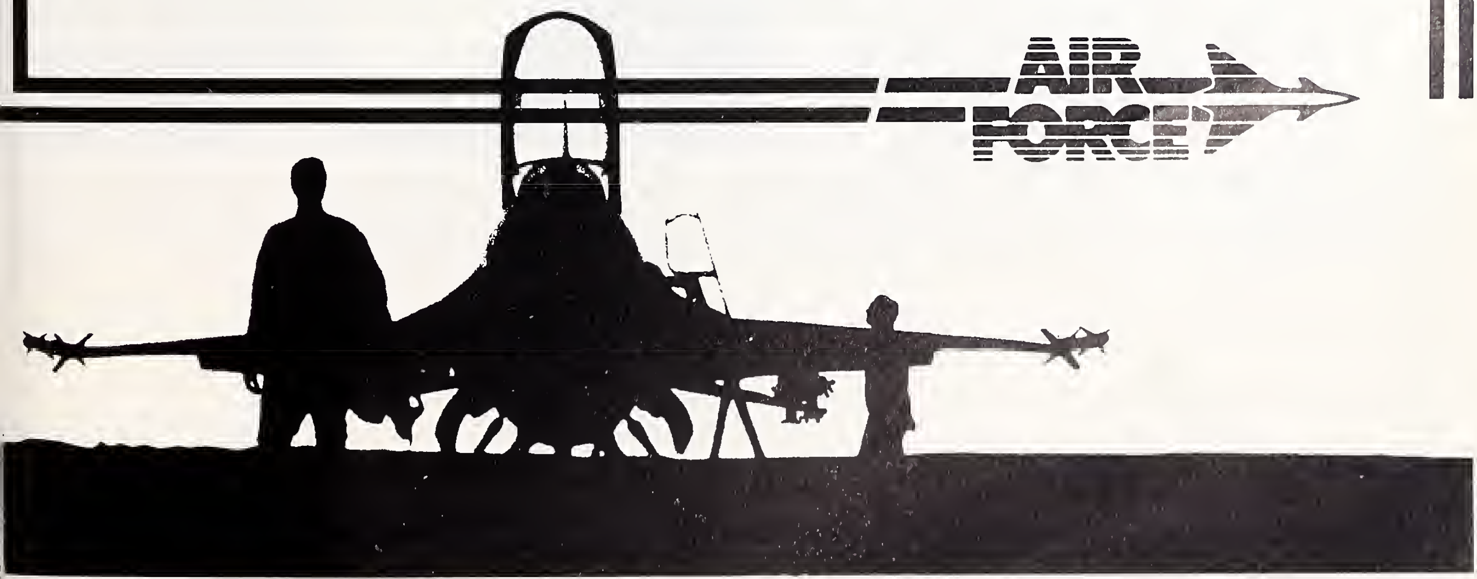

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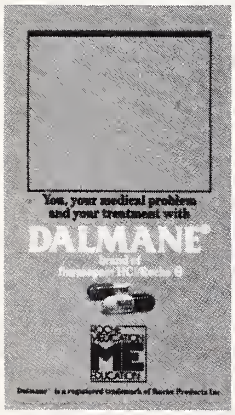
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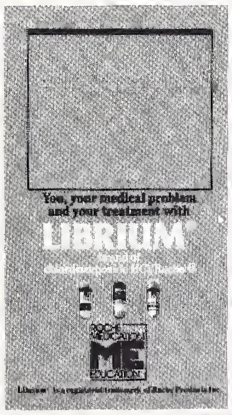
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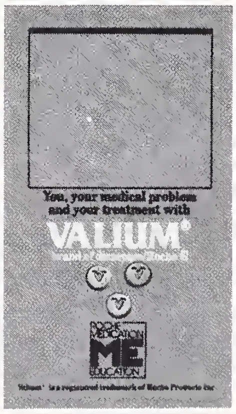
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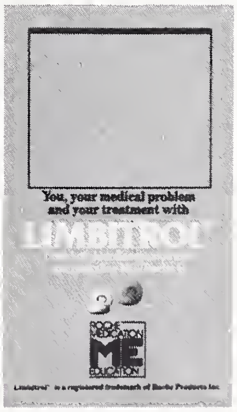
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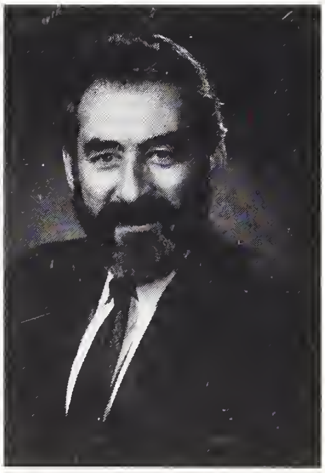
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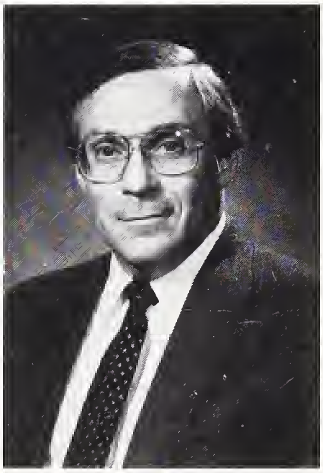
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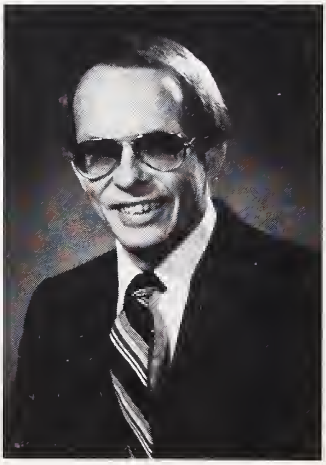
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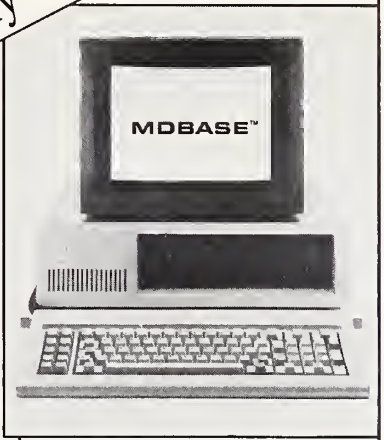

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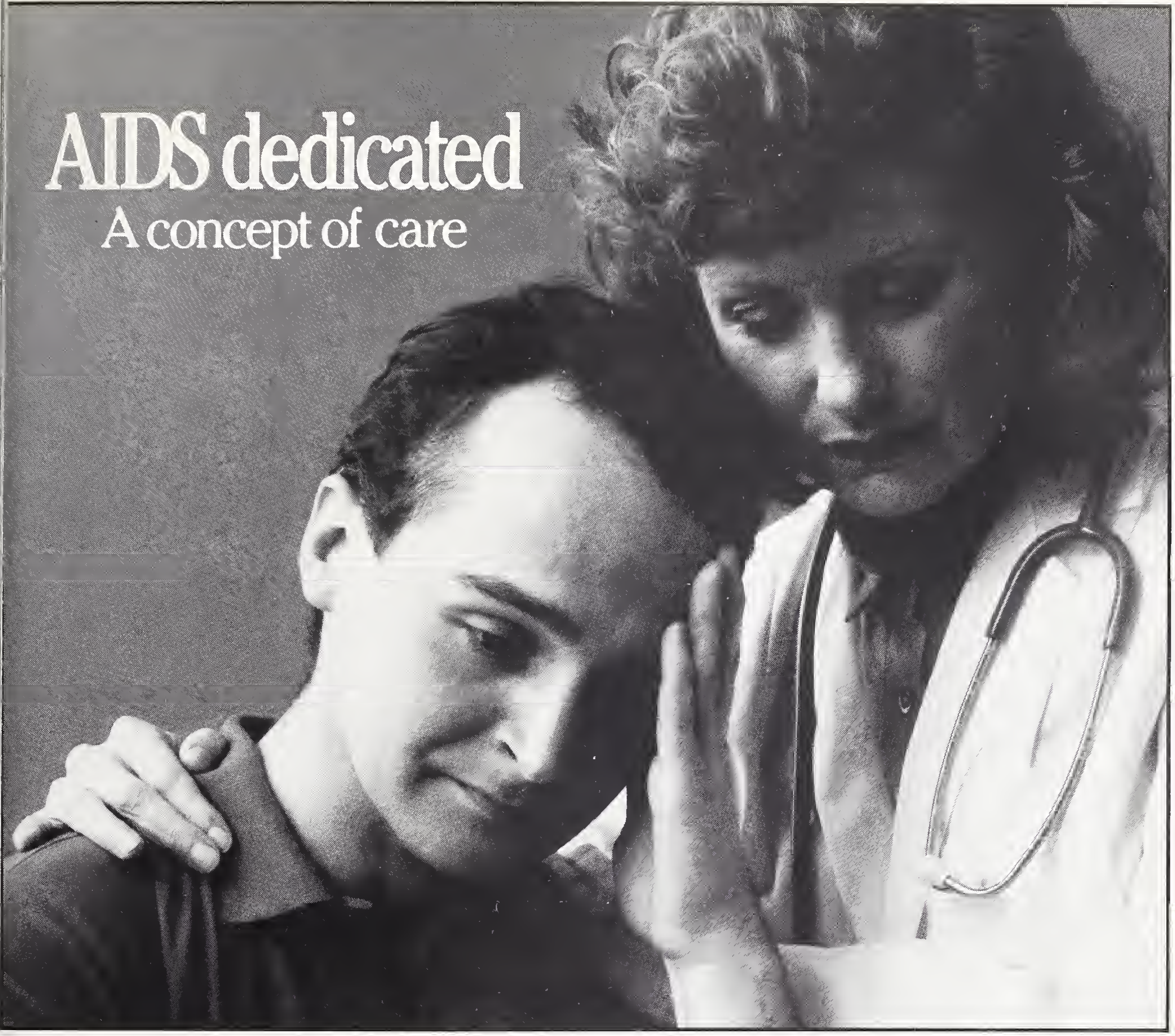

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THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY APRIL 1987

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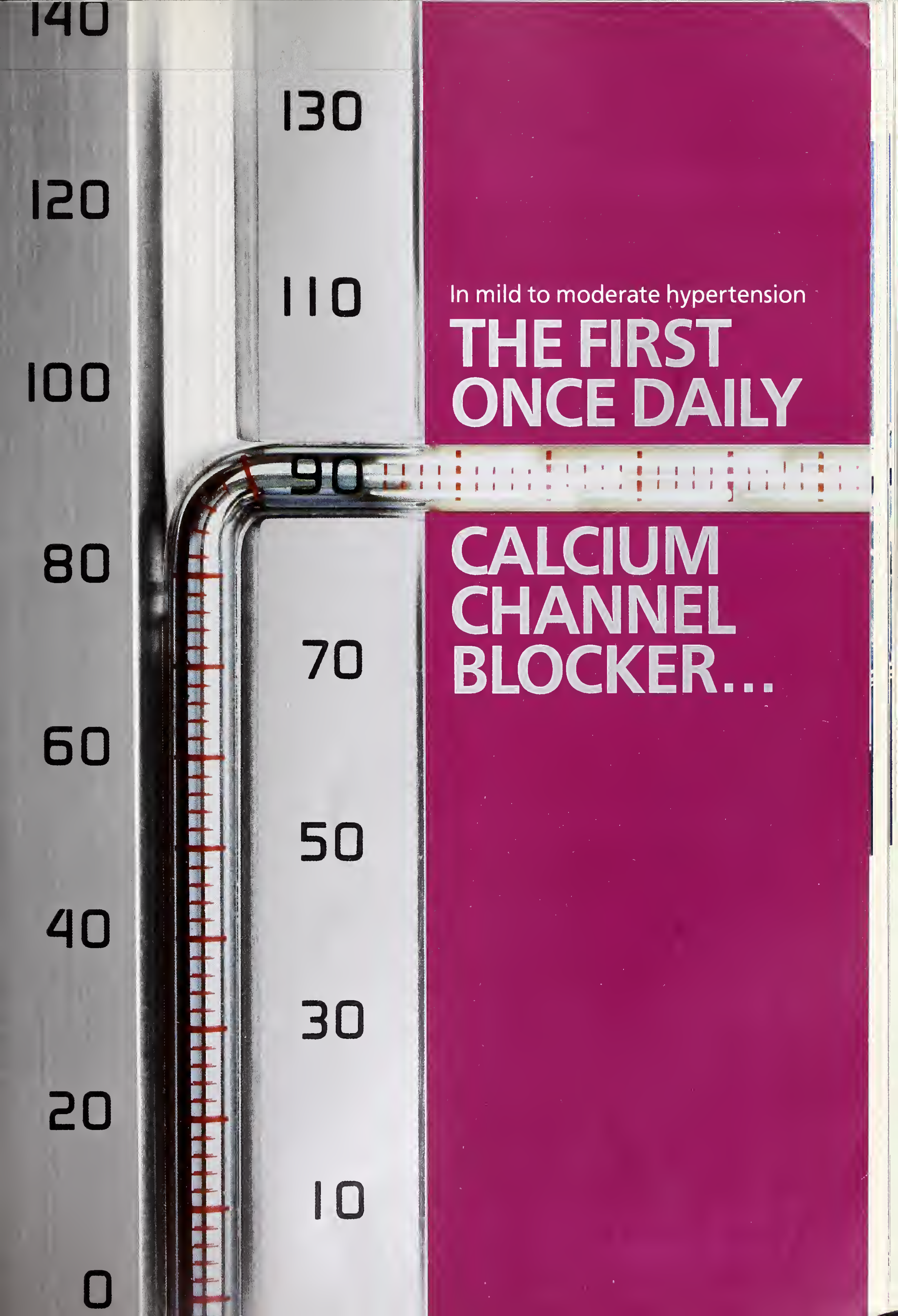

In mild to moderate hypertension

THE FIRST
ONCE DAILY

CALCIUM
CHANNEL
BLOCKER...

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ONCE DAILY

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JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

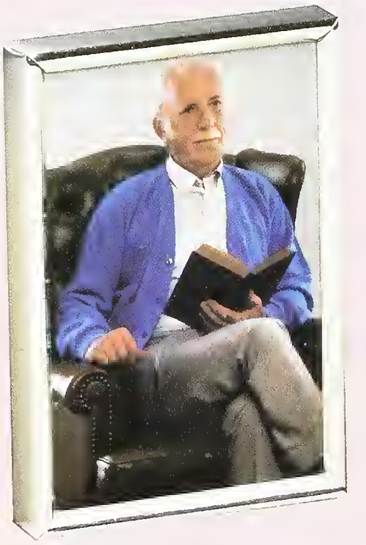
YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because…
- Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
- Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN® (verapamil HCl/Knoll) because…
- Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
- Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because…
- Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
- Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102… confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car… total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
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Please see adjacent page for brief summary

In mild to moderate hypertension Brief Summary

THE FIRST ONCE DAILY CALCIUM CHANNEL BLOCKER

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CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

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MEMBERSHIP NEWSLETTER

MSNJ

THE MEDICAL SOCIETY OF NEW JERSEY VOLUME 41

DIVIDENDS REDUCE OVERALL COSTS FOR MSNJ BLUE CROSS/BLUE SHIELD AND MAJOR MEDICAL PROGRAMS

While cost alone probably was not the chief consideration you had when you joined MSNJ's Blue Cross/Blue Shield and Major Medical Programs, you obviously considered it. Even though direct coverage sometimes can be purchased for a cheaper rate initially, overall premiums paid for your MSNJ programs generally turn out to be less, and the benefits are better than can be obtained on an individual basis.

If you are an MSNJ Program participant, you expected to pay your premiums and enjoy the excellent benefits and services the programs provide. You probably did not expect also to receive dividends that effectively would reduce your paid premiums. This is what will be happening, however, for members who participated in these programs before the March 31, 1986, settlement dates.

Members participating in the Blue Cross/Blue Shield Program will receive a dividend of approximately 6 percent of the premiums paid for persons under age 65. Members in the Major Medical Program will receive a dividend of approximately 6.9 percent of premiums paid for the two years ended March 31, 1986. These dividends were possible even though plan utilization and charges for medical services have generally increased during the dividend periods. The current dividends will be paid before the end of the first quarter, 1987.

MSNJ's Committee on Membership Services hopes that in future years these insurance programs will continue to earn enough surplus for a dividend to be returned to the participants. Members should keep this in mind when comparing insurance costs.

EXAMINATION OF MEDICARE AND MEDICAID PROGRAMS

Medicare and Medicaid are two very different federal health programs. Medicare applies to all persons over age 65 and certain persons under age 65 who are disabled. It essentially is an insurance-indemnity type of program. All persons meeting the age requirement are covered, regardless of their income, assets, health, or any other circumstances. The elderly living on social security and nothing else have the same entitlement as the elderly captain of industry with a global corporate empire and a multi-million dollar annual income. Medicare, which is funded through various taxes, also includes deductibles and co-payments. For the last six years the Congress, in an effort to control the costs of this program, have begun a scheduled curtailment of benefits and have increased the areas and amounts of patient liability. Medicare is best defined as a limited benefit program.

Medicaid, which is jointly funded by the state and federal governments, is a full-service program. It covers our most economically deprived citizens. There are no deductibles or co-pays. There are very few exclusions.

While both programs have socially and politically accepted goals, they have not lived up to their promise, made in the 1960s, to move the elderly and the poor into the mainstream of health care, and to do away with and prevent a bilevel or trilevel system of care and payment.

Medicaid, in its treatment of physician services in our state, is an embarrassment. We are faced with a fee schedule essentially as it was adopted in 1970. Doctors are paid $7 to $9 for office visits, while the same patient going to a hospital outpatient department will generate a payment that averages more than $70 for the same service. The Medicaid services budget exceeds $1 billion annually. Of that amount, about $60 million at best is paid to physicians for all types of services, from office care to neurosurgery and heart surgery. Recently, the Administration has advanced special programs to care for the pregnant poor. One of the reasons that effort is necessary is that Medicaid reimbursement for obstetrical care is pitiful. A physician receives from Medicaid $247 for that service. The average fee statewide for private patients is $1,400. In this situation, a doctor would have to deliver about 120 babies annually under Medicaid just to pay for current malpractice insurance premiums.

The result of inappropriate and insufficient payment, where doctors do not receive their usual fees and are precluded from billing for the balance, is lack of access. Ten percent of the physicians under Medicaid provide about 90 percent of the care. The balance of the medical community, for very sound reasons, avoids becoming involved.

Medicare, which started out in a better position than Medicaid, has been the victim of poor planning, faulty design, underestimation, actuarial miscalculation, and poor management. Obviously, these factors are not easily corrected. That Congress and its advisors underestimated the number of senior citizens, their life span, and the care they might require, is understandable. That Congress did not, for example, realize that offering end-stage renal disease services would be expensive is not as benign a mistake. They were warned about that and other errors. That Congress tilted reimbursement to institutional care and then became alarmed at the bill is not at all consoling. Several years ago, when confronted by a shortfall in the Hospital Part A trust fund, Congress removed some $12 billion from the Part B (Professional Services) trust to Part A. Congress has not replaced the transferred monies.

In the past six years, Congressional efforts at cost containment have forced elderly patients out of hospitals before they are completely recovered by the implementation of the DRG and PRO systems. In 1984, physician fees were frozen at 1982 approved levels. Medicare does not in effect pay the stipulated rate of the 75th percentile, but probably about the 65th percentile. Claims processing by the Medicare carriers has become a nightmare. The same service by a different physician produces a different rate. Because of the vagaries of the program, the most experienced physicians are receiving the lowest reimbursement. The same physician will receive different amounts for the same services. Payments are inordinately delayed, and the program is in disarray.

On October 1, 1986, Senator Bradley wrote to the Medical Society about some of the shortcomings of the program. I would like to quote a portion for the record today: "Recently, however, the Health Care Financing Authority (HCFA) has increased delays in processing claims to an intolerable degree by directing all Medicare contractors to deliberately delay processing claims. This policy has resulted in an 88 percent increase in the number of unpaid Medicare claims, and has reduced the actual payment cycle in many cases to 45 days or more. I believe these policies have caused undue hardship to thousands of Medicare beneficiaries by lengthening the waiting period for claims payment. In addition, these delays have discouraged many physicians from participating in the Medicare program, thereby reducing the quality and convenience of service to all Medicare beneficiaries and providers."

Senator Bradley's comments relate only to a single defect in a very large and severely stressed program. He does, however, make a telling point. If the program functioned well, doctors would want to participate in it. Mandatory assignment is not the answer to fixing the defects. Reason, judgment, incentives, and common sense, applied after careful analysis, are what will correct the situation. Medicare is a federal program. Its correction is the responsibility of the Congress.

Mandatory assignment based upon licensure is a poor idea. It is not a valid licensure criteria, and would, among all other factors, result in our state government abdicating to the federal government the licensing and regulation of health professionals. Assuming such a proposal would withstand legal challenges, it will not work. Under the best of circumstances, it will produce another Medicaid scenario, with very few physicians participating. The result could be disastrous, particularly in specialties like anesthesia. The anesthesiologist cannot pick and choose his patients. He is required to serve all those that are in need of services. If he or she cannot bill their regular fees to those that can pay, and if Medicaid continues paying 30 percent of the regular rate and Medicare 65 percent, there will be no alternative but to leave New Jersey.

We are willing to work with you on programs which assure that the economically disadvantaged receive necessary care, and that reasonable fees are charged to those with the ability to pay.

Vincent A. Maressa

LEGISLATIVE UPDATE: COMPREHENSIVE TORT REFORM LEGISLATION

The Assembly enacted a tort reform package which dealt with collateral sources of income, structured payments, limitation on noneconomic damages, and joint and several liability. An effort now is being made to amend the statute of limitations.

There has been little or no progress in the Senate. The Judiciary Committee, controlled and influenced by the trial bar, has refused to release any meaningful legislation. The prospects for success are not encouraging unless every doctor contacts every state senator.

THE GRAYING OF SLEEP

A bed partner could save your life, especially if you're over age 60.

Another person often is pivotal in noticing a major "hidden" sleep disorder of which the victims themselves may be unaware, although its episodes can even occur hundreds of times each night.

The disorder, *sleep apnea*, causes repeated halts in breathing during sleep that last from 10 to 180 seconds each. It is most common in the elderly and in overweight middle-aged and older men who snore. It usually worsens with increasing body weight and advancing age.

A person with sleep apnea awakens briefly, though not to full consciousness, following each episode and gasps for air. Sleep apnea not only interrupts the flow of sleep but can be fatal if unchecked, especially in older persons who already have heart disease or high blood pressure.

Unfortunately, even if a person over 60 is not burdened with sleep apnea, he will find his sleep is different from that of early adulthood. Sleep changes during later years are a fact of life because slumber, like other parts and functions of the body, "ages." It becomes lighter, more erratic, and fragile.

The good news is that coping with the "graying" of sleep is possible.

A booklet "What You Should Know About Insomnia" is available from INSOMNIA/UPJOHN, Dept. FS, P.O. Box 307, Coventry, CT 06238 as a patient service.

For the location of nearby sleep disorders centers, write to: Association of Sleep Disorders Centers, P.O Box 2604, Del Mar, CA 92014.

WE BID FAREWELL

The Medical Society of New Jersey recently mourned the death of two women whose lives at one time had been very involved with Medical Society affairs.

Marion Rogers Walton, who for many years was the Society's convention manager, died in Hunterdon Medical Center, Flemington, on January 26, 1987, at the age of 69. Her first position with the Medical Society had been in the capacity of secretary to Edith L. Madden, who was administrative secretary and convention manager. After a brief interruption in service, Mrs. Walton returned to assume the position of convention manager upon Mrs. Madden's death in 1966, which she held until her retirement in 1983.

On February 19, 1987, Eva Williams Kustrup, widow of deceased physician, John F. Kustrup, Sr., M.D., died at the age of 80. Mrs. Kustrup was president of the Auxiliary of the Medical Society of New Jersey in 1968, the same year that her husband, a Trenton surgeon, served as the 176th President of MSNJ. Mrs. Kustrup was a gifted artist, and her original sketch of the Society's headquarters at 315 West State Street, Trenton, was perpetuated on notepapers and other items used in the Auxiliary's fundraising activities. Two sons presently are members of the Medical Society, John F., Jr., a surgeon, and William J., an ophthalmologist.

KEEPING HEALTHY

"If you want to be healthy morally, mentally, and physically, just let go. Let go of the little annoyances of everyday life, the irritations and petty vexations that cross your path daily. Don't take them up, nurse them, pet them, and brood over them. They are not worthwhile. Let them go!"

RESOLVING DISPUTES

This is to alert and advise you that we have a mechanism within the Society to help physicians with reference to any discussions or negotiations with any outside group for the provision of health care. The Council on Medical Services and the Ad Hoc Committee on Health Care Reimbursement Policies stand ready to meet, counsel, and advise any physician or physician group which may have concerns, questions, or problems in this area. For further information, please call Mr. Joseph C. Lucci, at the Executive Offices, 609/896-1766.

FINI

"Only God does not err—and you are not God. Life is a long lesson in humility. We are only passing through."

1987 MSNJ MEMBERSHIP DIRECTORY

The 1987 *Membership Directory* of the Medical Society of New Jersey is available. The latest issue contains all vital statistics on the membership of the Medical Society of New Jersey, as well as information on most hospitals in the Garden State.

All members of the Medical Society of New Jersey will receive a free copy. Copies of the 600-plus page *Directory* are available for $50 plus sales tax.

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The Exchange Report

Initiated: Malpractice Reform

The Exchange has sponsored five major malpractice reform bills, which are now before the New Jersey legislature. Our goal is yours: to halt spiraling medical-care costs by cutting the number and size of malpractice awards. Before they ruin the economic and moral incentive to provide first-class medical care.

There must be limits.

We're fighting against unjustified claims. Claims that can't be supported by a competent expert witness. Claims that exceed a three-year statute of limitations. Claims that, by a legal quirk, result in outrageous windfall benefits.

We're fighting for reasonable limits...for the ultimate protection of both doctor and patient.

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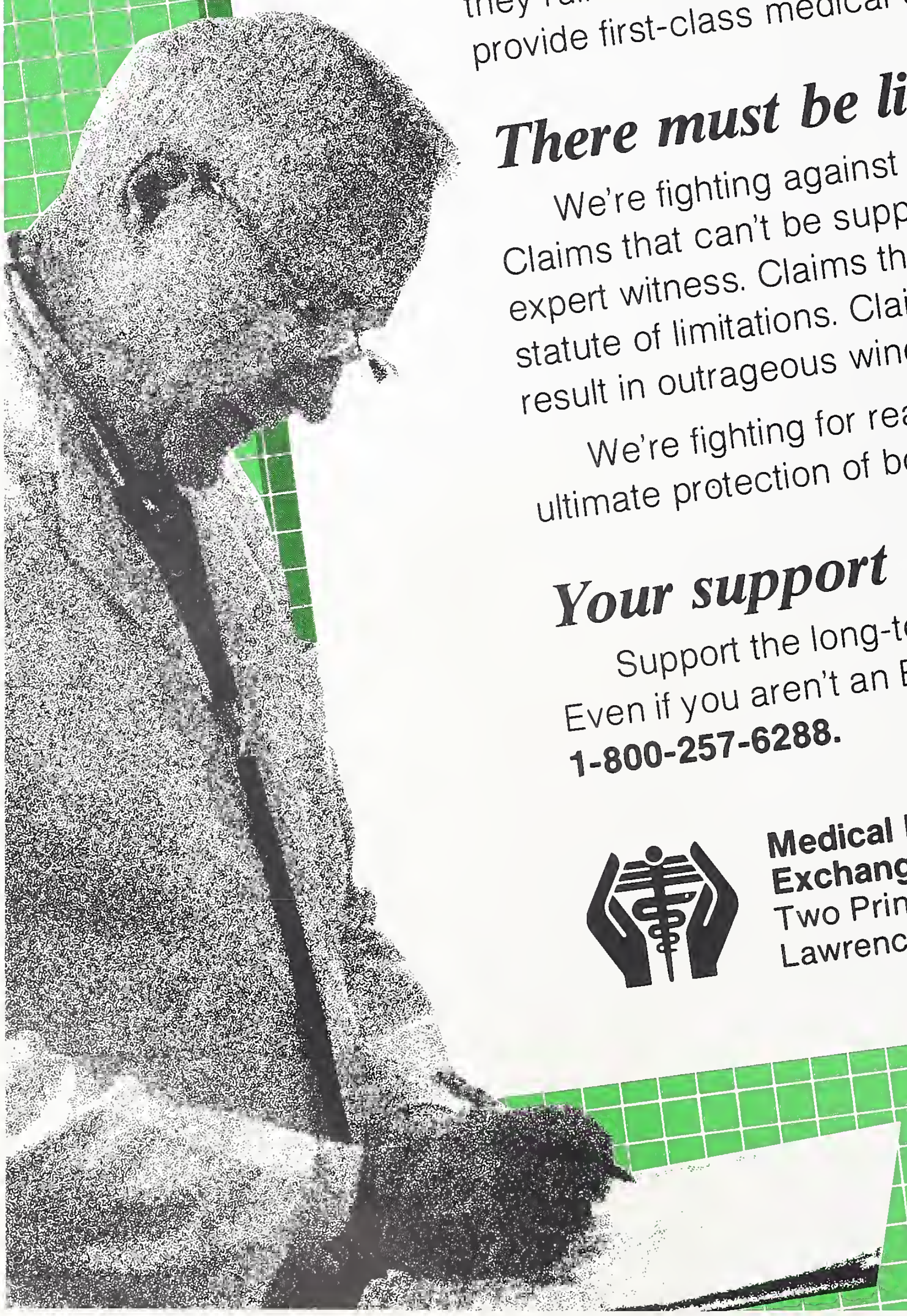

PROFESSIONAL LIABILITY COMMENTARY*

Physician-Patient Relationships

Invasion of Privacy; Patients' Options; Hospital Duty to Patient; Mandatory Risk Management; Defensive Medicine

PHYSICIAN LIABLE TO PATIENT FOR INVASION OF PRIVACY

In a patient's suit against a neurologist, the evidence was sufficient to support the jury's finding of invasion of privacy, the highest court of Massachusetts ruled.

In 1970, a patient was riding as a passenger in an automobile when it struck a tree. She was knocked unconscious. In the ensuing years, she experienced repeated fainting spells and headaches. In March 1974, the patient sought treatment from the neurologist.

During the period of treatment, the patient filed an action against the driver of the automobile. She hoped to prove that, as a result of the accident, she suffered from psychomotor seizures. Just before the start of the trial, the neurologist terminated her physician-patient relationship with the patient; the physician testified that she was unable to say with reasonable medical certainty that the patient suffered from psychomotor seizures or, that if the patient did suffer from those seizures, that they were causally related to the accident. A jury returned a verdict in favor of the patient for $9,000 against the driver.

The patient then filed an action against the neurologist for breach of a confidential relationship, invasion of privacy, unfair and deceptive acts, negligent testimony, and negligent diagnosis. A jury awarded her $18,000 on the invasion of privacy claim, and the physician appealed.

On appeal, the court noted that the jury found that the neurologist's discussions with the attorney for the driver and with a physician hired by the driver's insurance company did not prejudice the patient's presentation of her personal injury action. There was sufficient evidence to sustain a finding of invasion of privacy, because the physician hired by the driver's insurance company testified that he had consulted with the neurologist and that part of his opinion was based on the consultation. Disclosure of confidential medical information by the neurologist to one or two individuals, without the patient's consent, warranted the jury's finding that the neurologist's actions were unreasonable, substantial, or seriously interfered with the patient's privacy.

The court remanded the case to the trial court for a ruling on the neurologist's claim that the jury awarded an excessive amount of damages. The patient was not entitled to treble damages or attorney's fees in the action. The court noted that the neurologist's testimony did not prejudice the patient's case against the driver and that the patient suffered no monetary damages as a result of the physician's action. (*The Citation*, Vol. 54, No. 4, December 1, 1986)

LAWSUIT MAY SEAL PATIENTS' OPTIONS

Patients who file malpractice suits may find they have nowhere to turn for medical care if they need it, particularly in smaller communities, a physician survey from Las Vegas reported.

Fewer than 20 percent of nearly 300 responding medical specialists said they would continue treating patients who sued them. Almost a third said they neither would treat nor refer such patients even if there was no alternative source of care in the community, Dr. Lawrence R. Walker reported at the American Public Health Association meeting.

The survey involved a hypothetical elderly patient who had sued the responding physician and subsequently required medical care. Physicians could choose to treat the patient, refer the patient to another specialist in the community, refer the patient to a specialist outside the community, or refuse to treat or refer the patient.

If no alternative source of care was available, 31.2 percent of the physicians would neither treat nor refer the patient, said Dr. Walker, director of the graduate program in health and medical services administration at Widener College in Chester, Pennsylvania. He said 50 percent would refer the patient outside the community, and only 18.8 percent would treat the patient.

If another specialist was available in the community, 50 percent would refer the patient to that specialist and 37.7 percent of the physicians would refuse to treat or refer the patient. If a specialist associated with the respondent was available, said Dr. Walker, 31.1 percent would refer the patient to the associate and 35.8 percent would not treat or refer the patient.

The survey was sent to cardiologists, endocrinologists, gastroenterologists, nephrologists, neurologists, and urologists. Dr. Walker found no significant differences by specialty, but the longer a physician had been in practice, the less likely he was to treat or refer the patient. He found the same tendency among physicians practicing in smaller communities.

---

*This item from the Department of Professional Liability Control, MSNJ, was prepared by James E. George, M.D., J.D., and A. Ronald Rouse, who are the Director of the Department and Director of Special Projects, respectively.

Dr. Walker speculates that physicians could leave themselves open to greater liability if they refuse to treat or refer patients who sue them. He knows of no legal cases supporting the view that initiation of a malpractice suit terminates the doctor-patient relationship.

"A patient who is refused treatment might charge the physician with patient abandonment, thereby opening up a possible new form of liability for physicians," said Dr. Walker. That possibility points to the need for "alternative mechanisms of resolving grievances resulting from medical negligence." (*Medical World News*, December 8, 1986)

HOSPITAL DUTY TO PATIENT NOT EXPANDED

A hospital had no obligation to provide an unconscious patient with a "financially competent" physician, a Florida appellate court ruled. An unconscious patient was taken to the emergency room on November 29, 1977. A group of physicians at the hospital chose another staff physician to perform necessary orthopedic procedures on the patient, and such treatment resulted in a $360,000 malpractice judgment. However, the patient was unable to collect the full amount of the judgment because the physician neither had malpractice insurance nor assets sufficient to cover the amount of the judgment. The patient then filed an action against the hospital as well as the group of physicians who assigned the orthopedic physician to the patient. A trial court granted the hospital's motion to dismiss the complaint, the patient appealed. Affirming the decision, the appellate court said that the hospital's voluntary assumption of control over the unconscious patient did not create a duty or a contract that the hospital would provide him with a "financially competent" physician, as contrasted to a "medically competent" physician. The court noted that no case, either in Florida or elsewhere, has recognized that cause of action. (*The Citation*, Vol. 54, No. 4, December 1, 1986)

MANDATORY RISK MANAGEMENT

Massachusetts and Florida now require physician participation in risk management programs as a condition of licensure. Mandatory risk management statutes in other states, e.g. Kansas, New York, Washington, apply only to hospitals. (*The Citation*, Vol. 54, No. 3, November 15, 1986)

DEFENSIVE MEDICINE

For the past 35 years, a substantial part of my law practice has been in defending physicians against malpractice claims. My views on defensive medicine reflect this experience.

Intelligent discussion of the pros and cons of defensive medicine has been hampered for lack of uniform definition of the term. Most commonly defensive medicine is used to describe diagnostic and treatment procedures which a physician performs with the intention of protecting himself if he is sued for malpractice, and not for the benefit of the patient. Although this concept of defensive medicine conflicts with the ethic that a physician should place the interests of his patient above his own, nevertheless such practice often is condoned as a necessary evil in the present climate of medical liability.

Frankly, I strongly disagree with this concept of defensive medicine. There is no dichotomy between what is best for the patient and what is best for the doctor. They are one and the same. With rare exceptions, I have found that the opportunity for a successful defense is enhanced substantially to the extent that a physician-defendant can demonstrate that he has observed the rudiments of good medical practice. I also have found that some physicians who have engaged in diagnostic and treatment procedures which they considered unnecessary except for the purpose of defense if they were sued, actually found that what they had done proved to be the basis of suit against them. For example, invasive diagnostic procedures that cause death or injury, even if skillfully performed, may be difficult to defend where justification for the procedure is in issue.

It has been reported that $75.4 billion was spent on physicians' services in 1984 and that of this amount $17.5 billion was attributable to defensive medicine. Presumably this estimate refers to the cost of medical services that physicians would not have performed were it not for fear of being sued for malpractice. This does not mean that all of these services were worthless and of no benefit to patients. I believe that it is appropriate to say that the possibility of being sued for negligence does inhibit carelessness and fosters prudence in some physicians.

Our firm has tried or settled thousands of malpractice cases. Based upon our experience, the vast majority of diagnostic testing that might be classified as defensive medicine in hindsight proved to be clinically appropriate in the best interest of the patient, and incidentally in the defense of claims. On the other hand, we have experienced difficulty in defending physicians in a variety of situations in which certain diagnostic tests were not performed but which were contended by plaintiffs to be negligent omissions. Despite new sophisticated technology for the diagnosis of cancer, failure to diagnose cancer frequently is the basis for medical liability litigation. Failure to diagnose fractures also accounts for a significant volume of claims. The most alarming statistics involve claims related to births where improper treatment is attributable to failure to diagnose pregnancy problems.

The patient is not the doctor's adversary. It is a disservice to the medical profession to encourage physicians to think in terms of defensive medicine when they care for patients. The only admonition warranted is that the physician should engage in good medical practice to the best of his ability. He should maintain good records, keep the patient informed at all times, and stay abreast of current developments in his field of practice. (Max E. Wildman, J.D., Wildman, Harrold, Allen & Dixon in Chicago, *The Citation:* Vol. 54, No.2/November 1, 1986)

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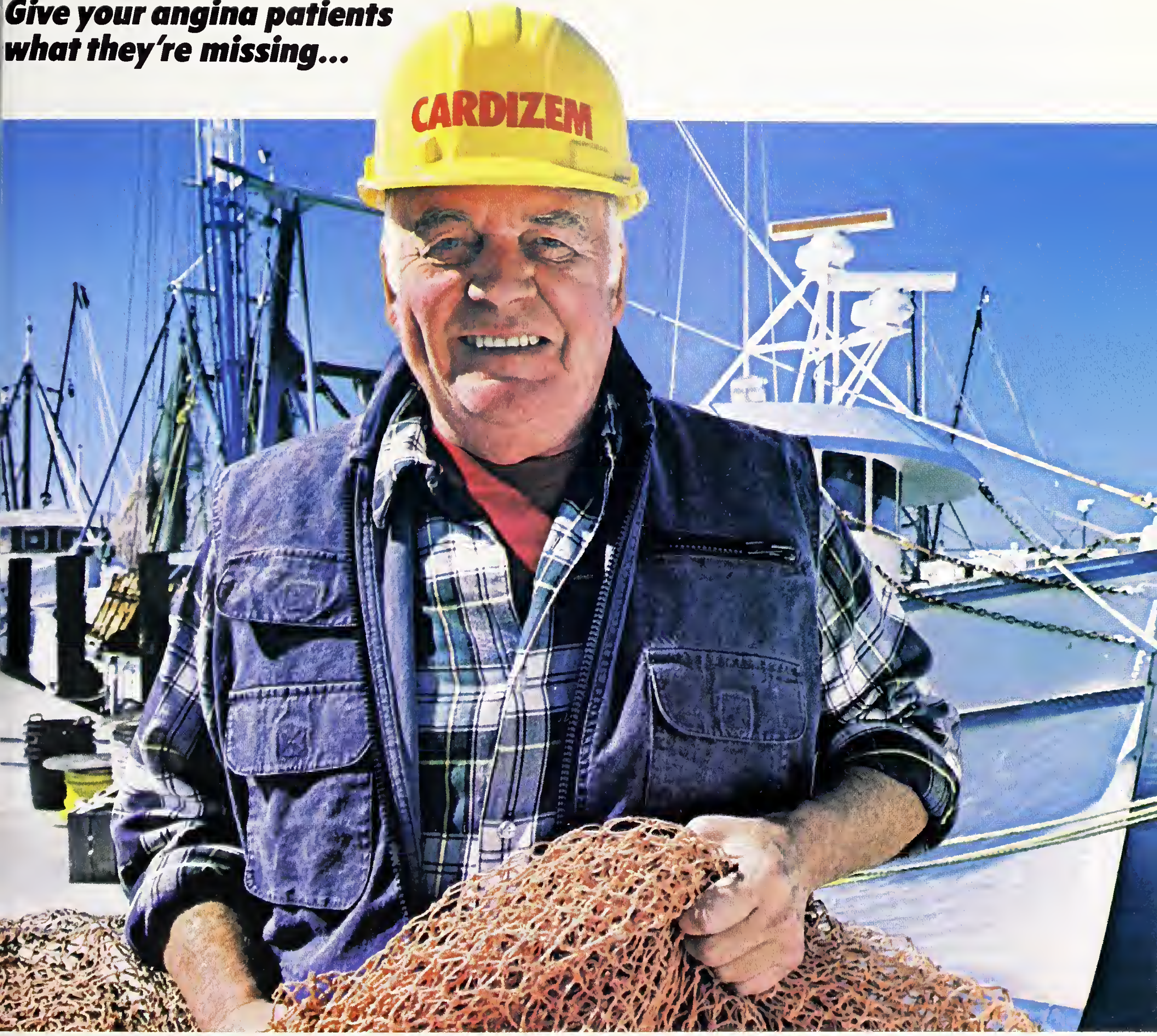

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***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

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CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. **Issued 7/86**

See complete Professional Use Information before prescribing.

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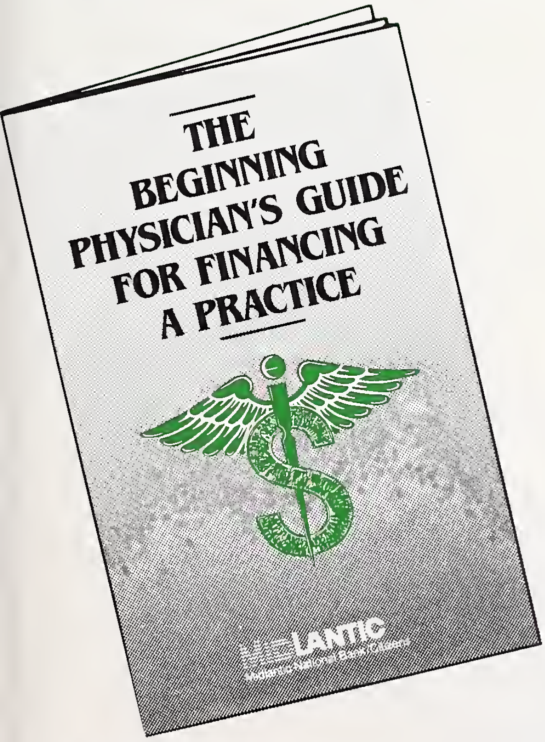
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ANALYSIS OF SURGICAL BLOOD USE

IN NEW JERSEY

To evaluate blood utilization for surgical procedures, we studied a cross section of New Jersey hospitals; our study was based on diagnosis, age, sex, and blood group. Patients who underwent orthopedic surgery and those over 65 were the largest users of blood.

The Medical Advisory Council of New Jersey Blood Services has representation from hospitals of diverse characteristics. Patient data for a study was obtained from the blood banks of 11 of these hospitals, which varied in bed size from 166 beds to 731 beds: 4 hospitals were in the 150 to 300 bed range and 7 hospitals were in the 400 to 750 bed range. These 11 hospitals represented 16 percent of total beds in New Jersey and the same percentage of admissions.

We analyzed the data for patterns of blood ordering and usage in common surgical procedures to develop a *Surgical Blood Order Guideline* specific to New Jersey hospitals.[1] A statistical analysis, based on blood utilization by diagnosis, sex, and blood type was achieved.

DATA ANALYSIS

Data were assembled under the following headings: name of procedure, age, sex, ABO group and Rh type, number of units crossmatched, and number of units used up to 24 hours after surgery. Surgical procedures were categorized by ICD9CM surgical code[2] and the sum of the three months' statistics was utilized to derive the average number of units per surgical category.

During the three-month study period, 638 surgical code procedures were performed on 5,954 patients and blood was used in 170 procedures. Six hundred five patients required 1,484 blood units. The 170 procedures were classifed into 46 code procedures after the deletion of procedures with less than 5 patients.

Nineteen major disease categories were selected and were ranked by units transfused and percentage of transfused units allocated to each. The total number of involved patients and the percentage of transfused patients were determined (Table 1) and the percentage of patients according to age, sex, and type whose surgical procedures required a negligible blood transfusion was established. These included females and males in each category and the number of patients in each surgical code in age range of 0 to 18, 18 to 40, 40 to 65 years, and over 65 years. Then, the number of cases in each category for which no blood order was placed, i.e. neither type-and-screen nor crossmatch, were similarly ascertained.

The largest blood usage was associated with surgery for diseases of bone and joint including hip surgery. Other major usages occurred during obstetrical and gynecologic procedures, surgery of the abdomen, diseases of the small and large bowel and blood vessels, and in cardiac surgery. The average need per transfused patient was determined to be 2.72 units.

Mercy Kuriyan, m.d., Dae Un Kim, m.d., Eric Wake, m.d., Sidney Kress, m.d., Ilana Pachter, m.d., Sheila Nayak, m.d., new brunswick*

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*Dr. Kuriyan is Director, American Red Cross, New Jersey Blood Services. Dr. Kim is Blood Bank Director, Saint Barnabas Medical Center. Dr. Wake is Blood Bank Director, University Hospital. Dr. Kress is Blood Bank Director, Perth Amboy General Hospital. Dr. Pachter is Blood Bank Director, The Medical Center at Princeton. Dr. Nayak is Blood Bank Director, Jersey City Medical Center. Correspondence may be addressed to Dr. Kuriyan, American Red Cross, New Jersey Blood Services, 167 New Street, New Brunswick, NJ 08901.

RESULTS

Analysis by Sex: The sex distribution of the 5,887 patients studied included 2,365 (40 percent) males and 3,522 (60 percent) females: 872 (37 percent) males were crossmatched of whom 273 (11.5 percent) males were transfused and 1,293 (37 percent) females were crossmatched of whom 349 (9.9 percent) were transfused. Forty-nine percent of transfused patients were found to be males and 51 percent females. Among cardiac surgery patients transfused, 71 percent were males and 29 percent females. Of patients transfused for surgery on blood vessels, 67 percent were males and 33 percent females. Of patients transfused for diseases of the small and large bowel, 52 percent were males and 48 percent females. For bone and joint surgery, excluding hip, 32 percent of transfused patients were males and 68 percent females, while for hip surgery alone, 40 percent were males and 60 percent females (Figure 1). Of the 213 open-heart patients (only one hospital involved), 175 received blood, 73 percent male and 27 percent female.

Analysis by Age: Patients studied by age numbered 4,838. Blood usage in major procedures is shown in Figure 2. Significantly, for surgery of blood vessel, small and large bowel, bone and joints and hip, 115 units of blood were provided to those over 65 years of age compared with 97 units used by all other age groups. Blood provided for those over 65 for blood vessel and bowel surgery was 55 percent of all blood used; for bone and joint surgery excluding hip it was 52 percent and for hip surgery it was 61 percent. On the other hand, for obstetrical and gynecological procedures, those over 65 required only 18 percent, whereas 60 percent was needed in the age range of 18 to 40 years. For laparotomy and abdominal surgery, 27 percent of blood was required for those over 65 while those 18 to 40 years received 40 percent and those between 40 and 65 years received 33 percent.

Analysis by Blood Group: Blood groups were available on 3,370 patients. The distribution is shown in Figure 3.

Procedures Not Requiring Blood: For 390 patients, a type-and-screen (T&S) was performed for 119 procedures in addition to those included in the study; none used blood. These procedures involved surgery on nerves, endocrine organs, eyes, ears, nose, mouth, biopsies of bronchus and lung, lymph nodes, pancreas, stomach, varicose veins, hernias, biopsy of prostate, cervix, bone arthroscopy, and various diagnostic procedures. The majority were seen as minor procedures for which T&S was unnecessary. An additional 635 patients neither had crossmatch nor T&S. They underwent various minor invasive and diagnostic and surgical procedures.

DISCUSSION

The crossmatch/transfusion (C/T) ratio is considered to be a standard method to determine the ratio of units crossmatched to those transfused.[1]

Our study showed that 6,129 units were crossmatched and 2,014 transfused, with a C/T ratio of 3.0. Boral and Henry consider a C/T ratio of approximately 2.5 to be ideal for a hospital with a full range of clinical services.[3] The ratio of 3.0 suggests that there may have been areas and procedures for which excessive preoperative ordering of blood took place, or that the patient population may have had coexisting transfusion needs. Closer analysis of procedures shows that the C/T ratio (Table 2) tends to be larger in procedures which qualify for a T&S only, such as cholecystectomy, bladder surgery, and dilatation and curettage; these procedures rarely require a transfusion. Analysis of mean unit use (mean units transfused) to all patients is given in Table 2. The largest number of mean units used per procedure is shown in descending order: aortic aneurysm, replacement of heart valve, cystectomy, operation of chest wall, pleura and mediastinum, abdominal lesion excision, radical excision of lymph nodes, hip arthroplasty, spinal fusion, and cardiopulmonary bypass.

These calculations selectively highlight the procedures having a high probability that blood will be used. A T&S and a *Surgical Blood Order Guideline* make possible the streamlining of hospital and laboratory costs, decrease clerical and identification errors, bring about a diminution in crossmatched units, and result in an efficient system of blood utilization.[4,5]

From available data, guidelines involving 132 procedures were developed; for example, dilatation and curettage, T&S only; cardiopulmonary bypass, 5 to 8 units; and total hip replacement, 3 units. Blood needs by sex indicated that more of the crossmatched and transfused patients were female. Patients over 65 needed more blood that all other age groups. A majority of those transfused were O Positive, followed by A Positive. This pattern is similar to the distribution of blood types in the area's donor population. Type of blood units transfused to specific patients was not available. Hence, it could not be established whether there was any substitution of O blood for patients requiring other blood groups. Our findings on blood use by age and sex were consistent with those found in national and other studies with minor exceptions.[6,7]

CONCLUSION

The crossmatch to transfusion ratio (C/T) is widely used as a statistical indicator for monitoring transfusion practice. The C/T ratio was found to be over 3.5 for a number of common surgical procedures. For spinal canal decompression, peripheral vascular bypass, cholecystectomy, transurethral cystoscopy, ovary excision, foot amputation, and simple mastectomy it was in the range of 6 to 8. For dilatation and curettage it was 11; for cesarean section it was 13, and for vaginal hysterectomy it was 14. Thus for vaginal hysterectomy, 1 unit was used for every 14 ordered.

Hospital transfusion committees, surgical departments, and transfusion services need to review current blood ordering practices so as to improve blood utilization where indicated. The appropriate use of blood products, which has taken on an increasing importance with the issue of disease transmission and cost containment, will enhance the availability of a limited resource—the community blood supply.

ACKNOWLEDGEMENT

The authors thank the blood bank directors and blood bank supervisors of the hospitals participating in the data collection of surgical blood use in New Jersey. We also thank Norman Boggs and Eleanor Kalman for assistance in preparing this manuscript.

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BLOOD UTILIZATION BY MAJOR CATEGORIES

TABLE 1

Category	Total Transfused Patients	Percentage Transfused Patients	Total Transfused Units	Percentage Transfused Units
Bone and joints, including hip	133	22	296	20
Female genital organs	61	10	145	10
Cardiac	57	9	110	7
Laparotomy and abdominal surgery	52	9	209	14
Small and large bowel	49	8	106	7
Blood vessel surgery	42	7	101	7
Graft and debridement skin and tissues	37	6	108	7
Respiratory	30	5	109	7
Kidney and bladder surgery	29	5	63	4
Neurosurgery	24	4	43	3
Prostate and male genital organs	19	3	40	3
Esophagus and stomach	16	3	51	3
Breast	13	2	22	1
Amputation of limb	10	2	13	1

COMPARISON BETWEEN CROSSMATCH/ TRANSFUSION RATIO, MEAN UNIT USE

TABLE 2

Procedure	Crossmatch/ Transfusion Ratio	Mean Unit Use	Percentage of Patients Crossmatched
Aortic aneurysm	2	5	100
Replacement of valve	3	4	100
Cystectomy	1	3	100
Lymph node, radical excision	2	2	93
Arthroplasty of hip	2	2	100
Abdominal lesion excision	1	2	47
Chest wall, pleura, and mediastinum	2	2	84
Spinal fusion	2	2	100
Cardiopulmonary bypass	2	2	100
Total hip replacement	2	1	98
Abdominal hysterectomy, total	5	0	77
Skull, brain, and meninges	9	0	88
Blood vessel occlusion	11	0	95
Hysterectomy vaginal	14	0	84
Cholecytectomy	8	0	51
Bladder	7	0	17
Dilatation and curettage	10	0	16

BLOOD USAGE BY SEX

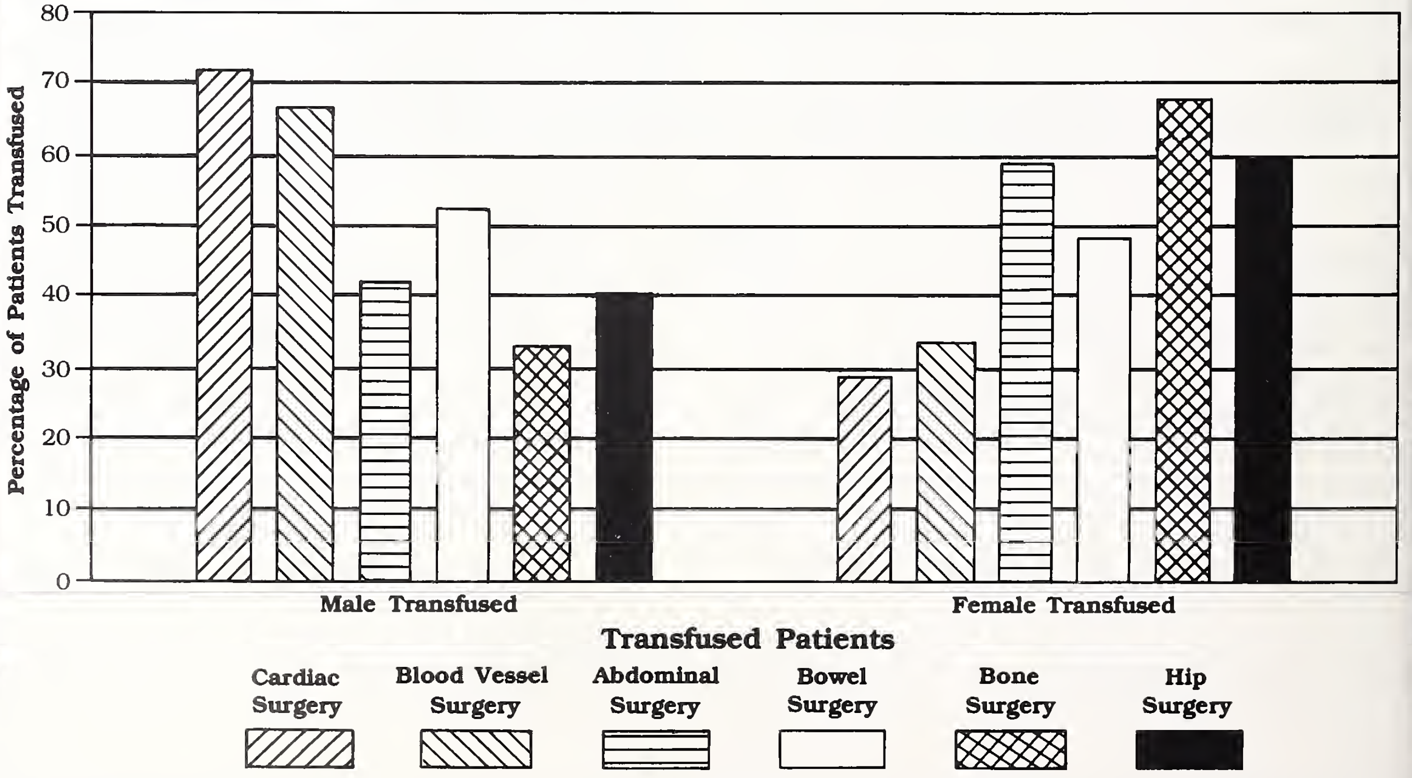


Figure 1—Blood usage by sex.

BLOOD USAGE BY AGE

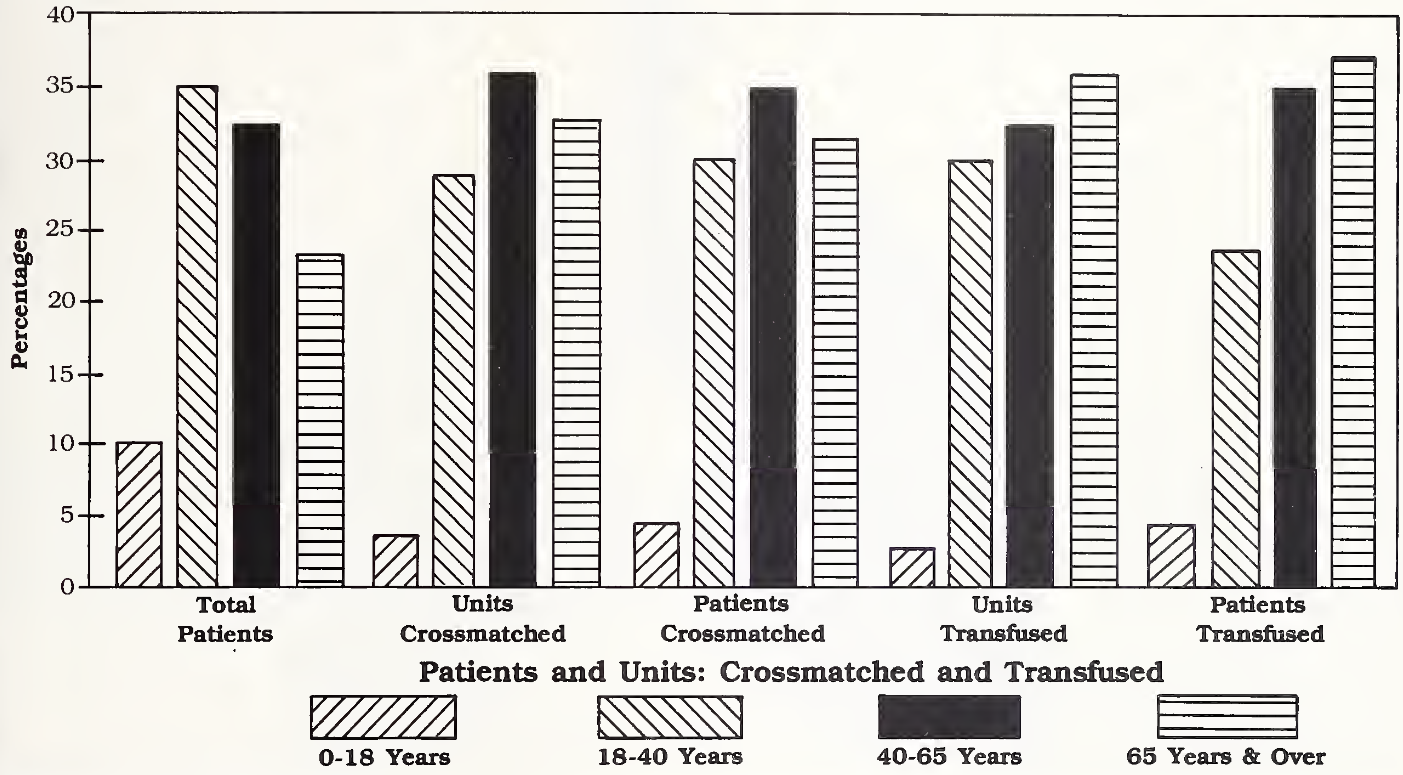


Figure 2—Blood usage by age.

BLOOD USAGE BY TYPE

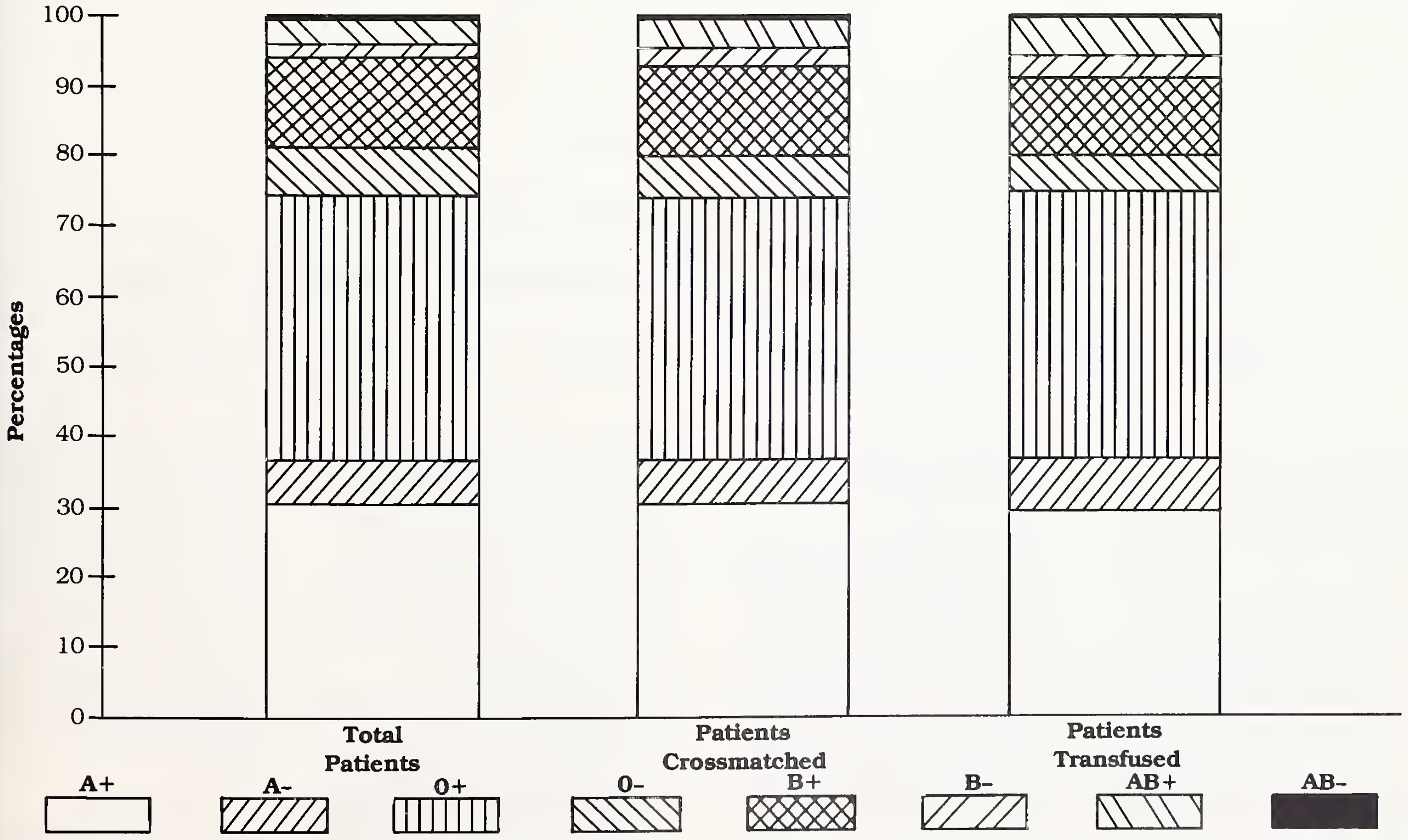
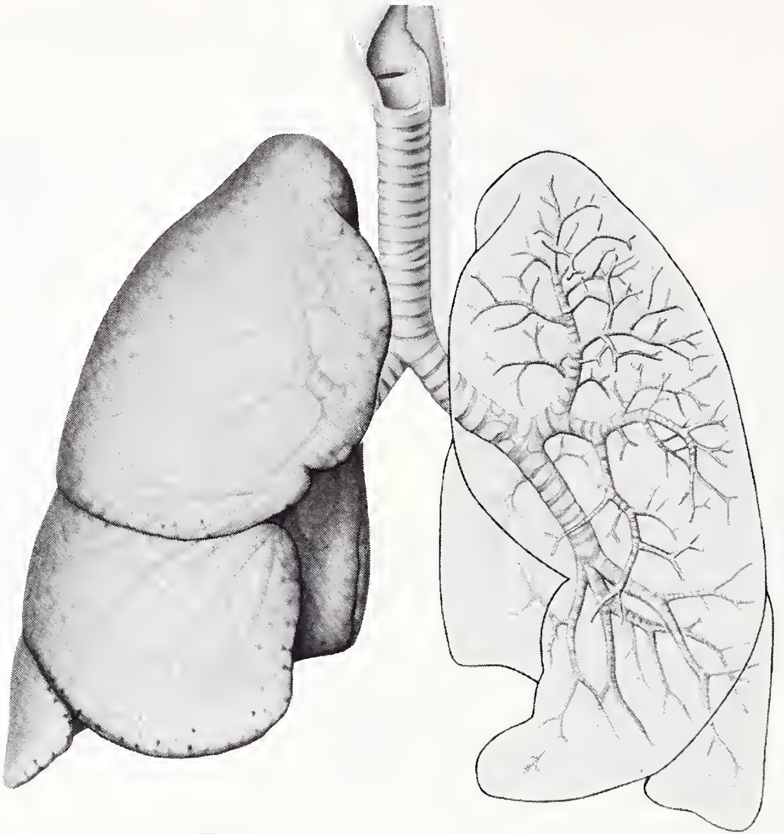


Figure 3—Blood usage by type.

Consider the causative organisms...



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Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile* Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor® (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbiliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although the were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less tha 1 in 500) or abnormal urinalysis (less than 1 in 200).

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Note Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylax of rheumatic fever. See prescribing information.

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BLOOD USAGE IN THE ELDERLY

**MERCY KURIYAN, M.D., NORMAN BOGGS, BERNARD EHRENBERG, M.D.,
KAMIL GAL, M.D., MANUEL ORTIZ, M.D., FELIPE QUERIMIT, M.D., NEW BRUNSWICK***

Dramatic increases in the number of persons over age 65 in New Jersey create the need for change in the collection and utilization of blood. The elderly are significantly greater users of blood than the general population.

A significant demographic trend affecting American society is the aging of its population. The number of elderly persons has grown and, for the next 50 years, will continue to grow more rapidly than the population as a whole. A greater proportion of the aged population is surviving into extreme old age. In New Jersey, hospitalization of the elderly is increasing at an annual rate of 4.8 percent.[1] In 1984, 28 percent of patients admitted to New Jersey hospitals were insured by Medicare. They represented 47 percent of patient days and 43 percent of gross hospital revenue.[2] Hospital services are the largest personal health care expenditures for those 65 and over.[3] Expanded research into the medical needs of the elderly is advocated to meet these changes.[4] Blood banking and the therapeutic uses of blood are an important aspect of these needs, especially in a state where the percentage of those over 65, compared to the population as a whole, is the second largest in the nation.[5]

BLOOD BANK CONCERNS

An aging population presents blood banks with three major problems:

1. As the proportion of the aged to the total population increases, the base of eligible blood donors becomes smaller. For a variety of reasons such as donor safety, senior citizens historically have been discouraged from participating in the blood donation process.[6] Currently, approximately 2 to 5 percent of the population participates in donating blood. Seasonal shortages continue to exist in various states including New Jersey. A gradual loss of the existing donor base due to aging of the population can impact on available blood supplies.
2. As blood needs increase for the elderly, many of whom have neither family nor close associates to donate on their behalf, reliance on the altruistic donor and promotion of the community philosophy of donor recruitment becomes increasingly important.[7]
3. A higher percentage of the elderly receive blood transfusions than any other segment of the population.[8] It has become apparent that the elderly nationwide are becoming major users of donated blood.

IMPACT ON BLOOD COLLECTIONS

Many states have regulations requiring that individuals above the age of 65 not participate as blood

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*Dr. Kuriyan is Director, American Red Cross/New Jersey Blood Services. Mr. Boggs is the Hospital Representative, American Red Cross/New Jersey Blood Services. Dr. Ehrenberg is Blood Bank Director, Elizabeth General Hospital. Dr. Gal is Blood Bank Director, Newark Beth Israel Medical Center. Dr. Ortiz is Blood Bank Director, Hamilton Hospital. Dr. Querimit is Blood Bank Director, St. Clare's Hospital. Correspondence may be addressed to Dr. Kuriyan, New Jersey Blood Services, 167 New Street, New Brunswick, NJ 08901.

TABLE 1

Blood Utilization Patterns by Age: Crossmatch/Transfusion Patterns

Procedure	Percent Crossmatched*		Percent Transfused*		Percent Transfused†		Mean Units Tranfused•	
	<65	>65	<65	>65	<65	>65	<65	>65
Craniotomy	88	100	35	0	100.0	0.0	3	0
Decompression Spinal Canal	79	83	10	33	78.0	22.0	3	2
Lobectomy of Lung	90	100	40	50	80.0	20.0	3	1
Incision of Chest	75	86	25	29	60.0	40.0	19	1
Valve Replacement and C/P Bypass	100	100	94	85	63.5	36.5	3	4
Excision Aortic Aneurysm	100	100	100	100	15.0	85.0	10	6
Peripheral Vascular Shunt/Bypass	71	89	19	30	33.5	66.5	2	2
Radical Excision Cervical Nodes	100	100	71	100	83.5	16.5	3	1
Partial Gastrectomy with Bypass	100	100	38	100	60.0	40.0	2	9
Colectomy	89	84	30	38	40.0	60.0	2	2
Abdominal Resection of Rectum	100	100	100	67	30.0	70.0	2	1
Total Cholecystectomy	52	62	5	8	66.5	33.5	2	2
Exploratory Laparotomy	73	92	24	46	75.0	25.0	4	4
Nephroureterectomy	100	100	38	50	50.0	50.0	2	4
Prostatectomy	49	63	4	10	23.5	76.5	2	2
Total Abdominal Hysterectomy	75	68	16	11	93.5	6.5	2	5
Reinsertion of Internal Fixation Device	100	96	50	46	15.5	84.5	2	2
Open Reduction and Internal Fixation	42	89	16	41	31.5	68.5	3	2
Spinal Fusion	100	100	80	0	100.0	0.0	3	0
Total Hip Replacement	100	95	63	58	42.5	57.5	2	2
Arthroplasty of Hip	100	100	50	88	22.5	77.5	3	2
Debridement of Wound	77	8	60	0	100.0	0.0	4	0

*In this age group.
†In this age group of total transfused in all ages.
•Number of units transfused/number of patients transfused.

donors or do so only on the approval of a physician. The consequence of these regulations is that people above the age of 65 usually are lost to the donor base and are cut off from assuming a social responsibility which many previously discharged with enthusiasm. About 8 in 10 persons 65 and over now describe their health as good or excellent compared with that of others of their own age.[9] New donor sources will become necessary to meet the increasing blood needs of an aging population and to maintain the blood supply for all citizens. An eligible healthy donor, over the age of 65, often is willing and eager to participate in a blood drive if asked. Such participation can prevent erosion of the donor base due to age disqualification.

Regulations of the *New Jersey State Department of Health, Chapter X,* on processing, storage, and distribution of blood (revised June 1984) deletes the requirement that blood banks may accept only blood from donors who have not yet had their 66th birthday.[10] Instead, current state regulations permit such individuals to donate with the blood bank physician's permission, if they meet other donor criteria.

In 1985, American Red Cross/New Jersey Blood Services, in accordance with the revised state regulations, permitted senior citizens in good health, to donate on all bloodmobiles. The donations by senior citizens comprised 0.40 percent of blood donations to American Red Cross/New Jersey Blood Services in 1985. This was approximately one and a half times more than the donations by senior citizens in the New York metropolitan area during a comparable period of time.[11] Active involvement of the healthy elderly in the blood donation process should help to minimize persistent blood shortages, which may otherwise occur in the next decade.

THE AGED AND THE INCENTIVE TO GIVE BLOOD

Since the publication of *The Gift Relationship* by the late English sociologist Richard Titmus,[12] there has been an ongoing debate on the propriety of attaching a penalty fee, nonreplacement fee, or other like charge onto a unit of blood freely donated. The value of using a philosophy of individual responsibility where friends and family are called upon to maintain the available blood supply has been questioned and studied.[13] The American Red Cross (ARC), which collects and furnishes half the nation's blood supply, has expressed a more definite viewpoint especially as regards the aged. They maintain the nonreplacement fee does not motivate people to donate blood, it merely penalizes blood recipients such as the aged and those who cannot give blood for themselves or arrange for donations

TABLE 2

Surgical Blood Utilization by Age:
Summary of Blood Transfusion Experience

	Age Category				
	0-65 Years		Over 65 Years		Statistical Values
	Number	Percent	Number	Percent	
Total Patients	861	65	465	35	
Crossmatched Patients	658	63	383	37	
Transfused Patients	295	61	191	39	
Units Crossmatched	2224	62	1365	38	
Units Transfused	925	60	625	40	
Probability of Crossmatched[*]		44		50	$P > 0.05$
Patients Crossmatched[†]		76		82	$P = 0.009$
Patients Tranfused[•]		34		41	$P = 0.007$
Mean Units Transfused	3.1		3.2		
Mean Unit Use	1		1.3		
C/T Ratio	2.4		2.1		

[*] Percentage probability of using crossmatched blood.
[†] Percentage of patients crossmatched/all patients in same age group.
[•] Percentage of patients transfused/all patients in same age group.

on their behalf.[14] In 1981, the American Association of Retired Persons and the ARC published a statement of understanding calling for the strengthening of the voluntary donor system especially where the aged are concerned.[15]

Medicare covers all blood costs except for nonreplacement or penalty fees for the first three units. In New Jersey, this Medicare policy is moot in many areas, since hospitals in 12 of the 21 New Jersey counties do not charge the penalty fees. In the other 9 counties many hospitals do make such charges; most hospitals accept credits if available, to cancel out these fees.

THE ELDERLY AS MAJOR BLOOD USERS

A study of blood utilization in surgical procedures in 11 New Jersey hospitals was undertaken by the Medical Advisory Council of American Red Cross/New Jersey Blood Service.[16] As part of this study, data were collected regarding surgical blood use according to age of patient, and type of procedure performed. Blood use in patients over 65 years was compared to the blood demands of the total population studied.

The study's patient population numbered 4,838 of whom 1,008 or 21 percent were over 65; the rest being from newborn to 65 years. Prior to surgery, 34 percent of the total patient population studied had blood crossmatched and reserved for their use. Of the patients who were crossmatched, 31 percent were over 65 years. A total of 4,533 units were crossmatched: of these, 32 percent of the units were crossmatched for the over 65 segment.

Among the study population, 492 patients actually were transfused; of these, 37 percent were over 65. The number of units used was 1,333, units; of these, 36 percent of the units were used by those over 65.[16] Certain surgical procedures were selected for an in-depth analysis. The 22 leading surgical procedures with the largest blood usage were studied by age category. A total of 1,326 patients were followed in these 22 procedures (Table 1). Significant factors emerged: 861 of these surgical patients were less than 65 years old and 465 patients were over 65 years; 65 percent of patients crossmatched for the 22 procedures were under 65 years and 35 percent were over 65; 61 percent of patients transfused were under 65 and 39 percent were over 65; 60 percent of the units transfused were to those below 65 and 40 percent were to those over 65; for patients over 65 years, 82 percent had blood crossmatched and 41 percent had blood transfused as compared to 76 percent and 34 percent, respectively, among those under 65 (Table 2).

Patients over 65 thus showed a greater percentage who had blood crossmatched ($P = 0.009$) and available prior to surgery. The percentage of patients who received transfusions among the 65-year-and-over age range ($P = 0.007$) was indeed higher than the percentage of patients transfused in the younger group of patients (Table 2). Blood use in the major surgical procedures selected confirmed the more extensive blood usage by those over 65. For hip surgery, excision of aortic aneurysm, prostatectomy, peripheral vascular surgery, and colectomy, those over 65 years were major users. The demand for transfusion services was shown to be greater in the elderly if only because of the high incidence of disease associated with blood transfusions such as bone, vascular, cardiac, and gastrointestinal disease.

DISCUSSION

The impact of the aging of the population in New Jersey is widespread in the health care industry. In the blood collection and transfusion field, the aging population affects the availability of blood and products and the use of these products. Senior citizens tend to donate less blood due to medical, social, and legislative influences and to use more blood and products than the general population, particularly for those conditions which are associated with aging.

A trend of decreased blood donations and increased blood usage is expected to accelerate with the projected increase in the over-65 population. Physicians can help combat such a trend first by encouraging senior citizens in good health to donate blood both for themselves as an autologous donation prior to elective surgery and to continue as donors to the community blood supply as long as they are able.

The frail elderly who are most in need of blood and the senior citizen with no family or friends and poor economic resources will become increasingly dependent on the voluntary donor. In New Jersey where the blood supply is derived entirely from voluntary donors, the question of donor motivation is of special importance. It is fortunate that most studies show that altruism is the leading incentive for blood donations.[17,18] A public awareness of this geriatric imperative is of paramount importance when planning for the future.

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A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

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Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta adrenergic stimulation are decreased proportionately

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product INDERAL LA can provide effective beta blockade for a 24-hour period

The mechanism of the antihypertensive effect of INDERAL has not been established Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

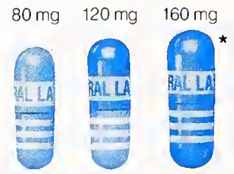
Propranolol is not significantly dialyzable.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e g , dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers

DIABETES AND HYPOGLYCEMIA Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment o hypertensive emergencies

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy

Cardiovascular: bradycardia, congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type

Central Nervous System: lightheadedness mental depression manifested by insomnia lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss emotional lability, slightly clouded sensorium and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea constipation, mesenteric arterial thrombosis ischemic colitis.

Allergic: pharyngitis and agranulocytosis erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized* The initial oral dose is 80 mg INDERAL LA once daily The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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POSITIVE DIRECT ANTIHUMAN GLOBULIN TEST IN NORMAL BLOOD DONORS

KUMUDINI MEHTA, M.D., HARRY TAYLOR, M.D., BART HOLLAND, PH.D., EAST ORANGE*

A study of blood donors revealed 164 healthy people who had positive antihuman globulin test (DAT). The cluster of positive DATs in an industrial area demonstrated in this study may be related to environmental factors.

The direct antihuman globulin test (DAT) is one of the most useful and universally applied tests in blood banks and immunohematology laboratories for the detection of auto-antibodies to red blood cells and the differential diagnosis of immune-mediated red cell destruction. It first was described in 1945 by Coombs in the diagnosis of "incomplete" Rhesus antibodies in sera.[1] In 1957, Dacie showed that certain complement components attached to the red cell membrane also can be detected by this test.[2] Further refinement of its use has been catalogued by Petz and Garratty.[3] Occasionally, the test is found to be positive in apparently healthy persons and this has been the subject of numerous papers speculating on the relevance of this finding.[4-7]

MATERIAL AND METHODS

This study was designed to compare our data with others for the incidence, distribution, and causes of positive DATs reported in normal populations. A retrospective analysis of a total of 260,376 blood donors at a major New Jersey blood center was reviewed. Statistics were obtained for four calendar years: 1979, 1981, 1982, and 1983. Complete data from 1980 were not available and were not included. All donors were apparently healthy and fulfilled the criteria necessary for blood donation by the American Association of Blood Banks.[8] None of the blood specimens from these donors had detectable alloantibodies or other abnormal, discrepant serologic test results required in processing blood components intended for transfusion.[9,10] There were 164 donors who had positive DATs. In most instances these first were identified by transfusion services who performed the test or who found that the donor's cells were incompatible with a patient's serum in the antihuman globulin phase of the crossmatch. These units were returned to the blood center and all serological tests immediately were repeated on the donor red cells in segments from these units. DATs, as well as antibody screen on sera and on red cell eluates were performed using polyspecific antihuman globulin, anti-IgG, and anti-C3d sera. In all cases, the positive DAT was reproducible using anti-IgG sera by the center's reference laboratory. The eluates from these donor red cells failed to demonstrate detectable antibody activity or specificity.

The ages of this donor population, their counties of residence, and date of donation were extracted for further analysis.

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*Dr. Mehta is a Clinical Instructor, Department of Pathology, UMDNJ-New Jersey Medical School, Newark. Dr. Taylor is Medical Director, North Jersey Blood Center. Dr. Holland is affiliated with the Division of Biostatistics and Epidemiology, Department of Preventive Medicine and Community Health, UMDNJ-New Jersey Medical School, Newark. Correspondence may be addressed to Dr. Taylor, North Jersey Blood Center, 45 South Grove Street, East Orange, NJ 07018.

TABLE 1

Geographic Occurrence of Positive DATs per Year

County	1979	1981	1982	1983	Total
Essex	10	8	9	13	40
Middlesex	4	5	5	4	18
Union	8	8	6	13	35
Passaic	1	3	3	4	11
Morris	4	3	3	5	15
Hudson	2	4	1	7	14
Somerset	1	1	1	–	3
Other Counties	6	8	8	6	28
Total	36	40	36	52	164

TABLE 2

Geographic Frequency of Positive DATs

County	Total No. Pos. DAT	Total No. of Donors	Incidence in 100,000	Odds of Pos. DAT
Essex	40	91,099	43.91	1:2277
Middlesex	18	30,974	58.11	1:1721
Union	35	25,917	135.05	1:740
Passaic	11	21,373	51.46	1:1943
Morris	15	25,202	59.52	1:1680
Hudson	14	15,546	90.06	1:1110
Somerset	3	8,777	34.18	1:2926
Other Counties	28	41,488	67.49	1:1482
Total	164	260,376	62.99	1:1588

RESULTS

The frequency of positive DATs in this study was 1:1588, with the highest incidence in the more industrialized areas (Tables 1 and 2). Advancing age plays a part in the formation of auto-antibodies as can be seen in the proportions of those which are positive in each age group. A substantial rise with age is demonstrable in Figure 1, and the rate of positive DATs was highest in the oldest age category. Oddly, there was another rise among 24- to 30-year-old donors. The number of positive DATs in that age group was higher than expected. A comparison of the number in the 24- to 30-year-old group with Poisson expectation based upon the 31- to 37-year-old group narrowly misses significance at the 5 percent level.

There were variations in the incidence of positive DATs by month but no definite cyclic patterns were evident (Figure 2). The annual number of donors with positive tests did not significantly differ during the four years included in the study. Thirteen of the blood donors with a positive DAT in this four-year period had repeat positive tests on subsequent or previous donations. The repeat tests were not counted in the statistical analysis.

Incidence rates varied widely from location to location. The range was from a low of 34 per 100,000 in Somerset County to a high of 135 per 100,000 in Union County with odds of 1:2925 to 1:740 respectively. The highest rate of positive DAT was observed in one of the most industrialized counties and was statistically significantly different from the average rate in the remaining counties ($P<0.01$) according to Poisson expectation. No other comparison of county rates with remaining overall average rates was statistically significant. Figure 3 shows a comparison of positive DAT rates by county.

DISCUSSION

There are a variety of genetic and environmental immunologic differences from one person to another. These may be demonstrated in test systems as a variance of normal or as overt expression of disease. Usually, individuals do not respond against most of their own constituents except in disease processes. The theory of self-tolerance has been attributed to numerous mechanisms. In more recent models, the control of immune responses seems to involve a complex system of idiotypes which regulates normal function as well as pathologic changes that result in disease.

A number of publications report positive DATs in normal people and these have described a variety of hypotheses to explain this phenomenon. Estimates of the frequency of positive DATs due to IgG alone in normal subjects vary substantially. It has been reported from 1 in 6,000 to 1 in 36,000.[4-7] One study postulated that age was a major influence on the positive DAT, i.e., decrease in immune functions with advanced age results in an increased incidence of autoantibodies.[4] Another hypothesis implicates the strength and avidity of the quantitative and qualitative differences of auto-antibodies.[11] In our study, the incidence varied between counties and was highest in Union County (1:740). Additionally, 20 percent of the donors with a DAT were young and healthy with age range between 24 to 31 years, suggesting that factors other than advancing age may play a part in the formation of auto-antibody.

Current concepts of auto-immune responses have changed. They are not as rare as once thought and not all auto-immune responses are forbidden or harmful.[12] Certain forms of auto-immune responses, such as recognition of cell surface antigen encoded by the major histocompatibility complex and of anti-idiotypic responses against self-idiotypes, unlike the "horror autotoxicus" of Ehrlich,[13] appear to be essential for the diversification and the normal functioning of an intact immune system. Plotz has proposed that the web of connections between idiotypes, anti-idiotypes and normal cellular components can cause the development of auto-antibodies after viral infections.[14] The high rate of positive DATs in an industrial area in this study may be related to environmental factors. It is possible that rabbit antihuman globulin serum is detecting a common determinant of auto-anti-idiotypic antibodies specific for red blood cell antigens.[15] Although the biologic importance of this observation remains uncertain, the increased incidence of positive DATs in blood donors from highly industrialized regions suggests that environmental antigens may stimulate the production of antibodies. These then may cross-react with red blood cell antigens. The cross-reactive antibodies may represent an abnormal response to environmental proteins against which the body is making auto-anti-idiotypic antibodies, a type of response which can be seen in normal persons immunized with tetanus toxoid.[16]

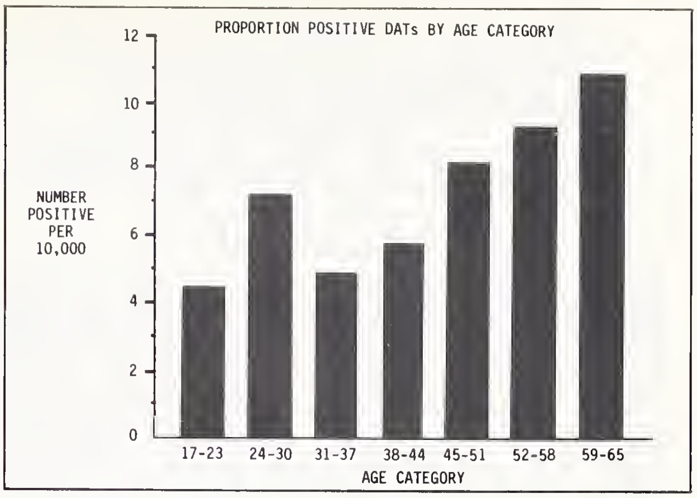

Figure 1—Proportion positive DATs by age category.

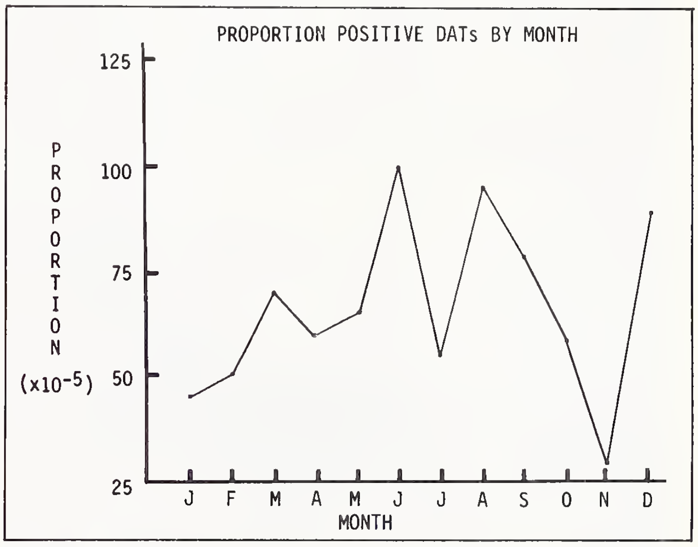

Figure 2—Proportion positive DATs by month.

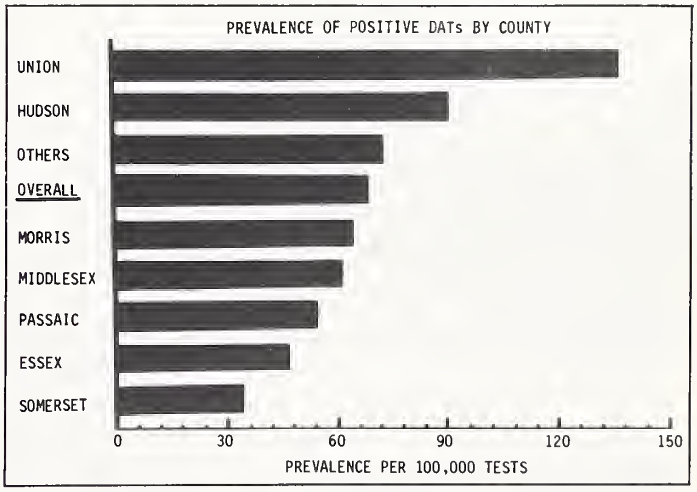

Figure 3—Prevalence of positive DATs by county.

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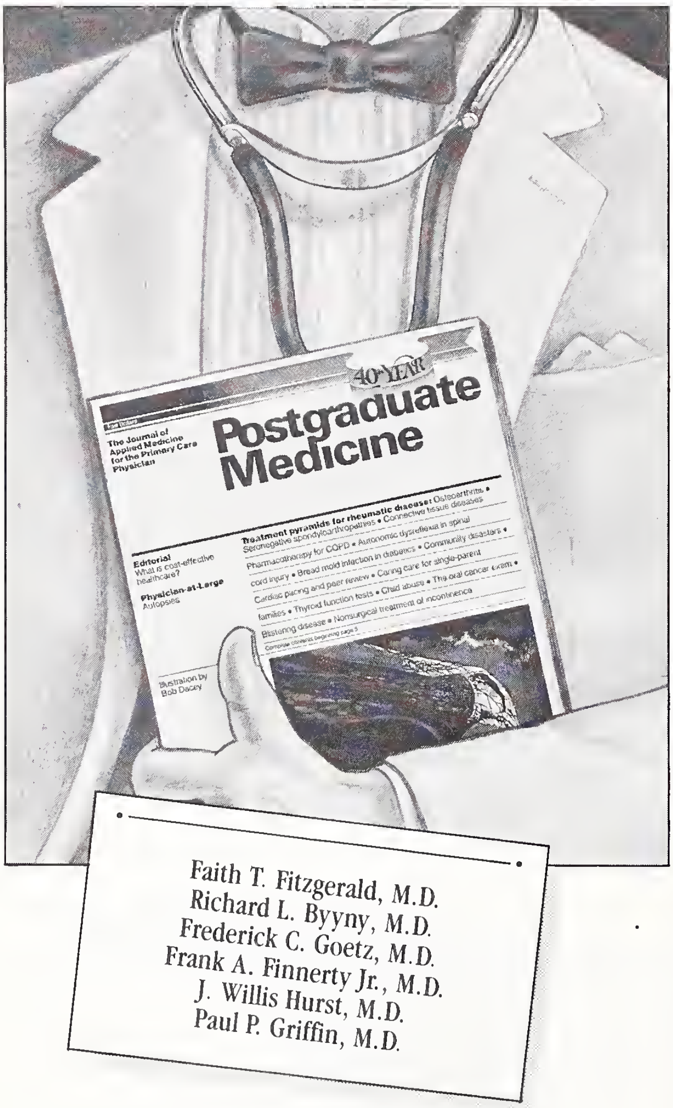
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ADVANCES IN CANCER: MONOCLONAL ANTIBODY THERAPY OF HEMATOLOGIC MALIGNANCIES*

KENNETH A. FOON, M.D., ANN ARBOR, MICHIGAN†

Monoclonal antibodies are highly purified and have been infused intravenously as well as used ex vivo to cleanse bone marrow from patients with leukemias and lymphomas.

Monoclonal antibodies are very useful in the classification of leukemia and lymphoma.[1] In addition, there is considerable interest in the utilization of monoclonal antibodies for treatment.[2,3] A number of studies utilizing monoclonal antibodies for the treatment of leukemia and lymphoma in animal tumor models[4] and humans[5-12] have been reported. These studies have emphasized the pharmacokinetics of monoclonal antibody therapy, toxicity, biodistribution, and responses to these murine-derived antibodies (Table).

CLINICAL RESPONSES

The responses in patients with B-cell derived lymphoma,[5] T-cell chronic lymphocytic leukemia,[6] cutaneous T-cell lymphoma (CTCL),[7,9-11] B-cell chronic lymphocytic leukemia (B-CLL),[8-12] acute lymphoblastic leukemia (ALL),[2-3] and acute myelogenous leukemia (AML)[13] treated with a variety of antibodies were very transient. In most cases, there was a 50 to 75 percent drop in the circulating leukemia cell count, which returned to the baseline level within 24 to 48 hours following the antibody infusion. The typical "saw-toothed" pattern reported by numerous investigators is shown in Figure 1 for a B-CLL patient treated with T101.[12] Patients with cutaneous T-cell lymphoma were treated either with the T101 or anti-Leu-1 antibodies that recognize the same 65,000 to 67,000 dalton glycoprotein antigen.[14,15] Improvement in cutaneous lesions was demonstrated in approximately half of these patients; however, these responses did not persist for more than a few weeks beyond the cessation of antibody therapy. Clearly, with the possible exception of anti-idiotype antibodies,[16,17] most unconjugated antibodies will not have an important therapeutic role for patients with leukemia and lymphoma. These early trials, however, have generated critical information for future trials with drugs and toxins conjugated to monoclonal antibodies.

IN VIVO ANTIBODY LOCALIZATION AND ANTIGENIC MODULATION

Dose-dependent in vivo localization was demonstrated by flow cytometry on circulating bone marrow, lymph node, and cutaneous tumor cells in all of the reported studies. This issue was investigated in depth in our own studies at the National Cancer Institute with the T101 murine IgG_{2a} antibody.

We studied the number of circulating leukemia cells

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†Dr. Foon is Associate Director, Division of Hematology/Oncology, Department of Medicine, University of Michigan, Ann Arbor. Correspondence may be addressed to Dr. Foon, Simpson Memorial Research Institute, 102 Observatory, Ann Arbor, MI 48104.

TABLE

Monoclonal Antibody Clinical Trials for Lymphoma and Leukemia

Disease	Antibody/Class	Specificity	No. of Patients	Toxicity	Effect	Institution
B-lymphoma	Ab89/IgG_{2a}	Lymphoma	1	Renal (transient)	Transient reduction in circulating cells	Dana-Farber
B-lymphoma	4D6/IgG_{2a}	Idiotype	1	None	Complete remission 36+ months	Stanford
B-lymphoma	IgG_1 or IgG_{2a} or IgG_{2b}	Idiotype	10	Fever, chills, nausea, dyspnea, rash, diarrhea	5 of 10 partial remissions	Stanford
B-lymphoma	IgG_{2a}	Idiotype	2	Fever	Transient minor responses	Netherlands
B-CLL	T101/IgG_{2a}	T65	13	Dypsnea, fever (101°-102°), hypertension	Transient reduction in circulating cells	NCI
B-CLL	T101/IgG_{2a}	T65	4	Dyspnea, hypotension, fever	Transient reduction in circulating cells	Univ. Calif. San Diego
B-CLL	IgG_{2b} and IgG_1	Idiotype	1	Fever, urticaria	Transient reduction in circulating cells	NCI
T-CLL	L17F12 (anti-Leu-1)/IgG_{2a}	Leu-1	1	Renal, hepatic (transient)	Transient reduction in circulating cells	Stanford
CTCL	L17F12/IgG_{2a}	Leu-1	6	Dyspnea, hives, cutaneous pain	Minor remission 5 of 7 patients	Stanford
CTCL	T101/IgG_{2a}	T65	4	Fever, chills malaise, bronchospasm, urticaria	Minor remissions	Univ. Calif. San Diego
CTCL	T101/IgG_{2a}	T65	12	Dyspnea, fever, (101°-102°F)	Minor remission in 4 patients	NCI
T-ALL	L17F12/IgG_{2a} 12E7/IgG_1 4H9/IgG_{2a}	Leu-1 T & B cells	8	Sporadic coagulopathy	Transient reduction in circulating cells	Stanford
ALL	J5/IgG_{2a}	CALLA	4	Fever (101°-102°F)	Transient reduction in circulating cells	Dana-Farber
AML	PM/81/1gM AML-2-23/IgG2b PMN 29/IgM		3	Urticaria, fevers, back pain, arthralgia, myalgia	Transient reduction in circulating cells	Dartmouth

that labeled in vivo with varying doses of T101. To assess in vivo binding of T101 to circulating leukemia cells, fluorescein-labeled goat antimouse immunoglobulin was added in vitro directly to the cells without supplying additional T101 in vitro. In this way, only cells that bound with T101 in the circulation following an intravenous infusion of T101 would label as positive. Positive results were obtained in all patients. Immediately following a 1 mg infusion of T101, circulating cells demonstrated up to 25 percent staining; following a 10 mg infusion, circulating cells up to 60 percent were stained. From 25 to 80 percent of circulating cells were stained in vivo with either rapid or prolonged infusions of 50 and 100 mg of T101 antibody.

Bone marrow samples were obtained to determine in vivo localization of T101 antibody in leukemic bone marrow cells. As indicated in Figure 2, bone marrow cells were removed prior to infusion, as well as 2 and 24 hours following infusion of 10 mg of T101 antibody. Prior to therapy, 90 percent of the cells stained in vitro with T101. Eighty-one percent of the leukemic bone marrow cells were labeled in vivo 2 hours after infusion of T101, with only 10 percent additional cells labeled when excess T101 was added in vitro. When excess antibody was added in vitro to the 2-hour specimen, staining was less intense than when excess antibody was added to the sample taken prior to therapy (compare dotted lines, top and middle curves), indicating a decrease in T65 antigen density most likely due to antigenic modulation. Twenty-four hours after therapy, the bone marrow cells no longer had in vivo bound T101 on the cell surface membrane and the cells had fully recovered expression of the T65 antigen.

In contrast to the results obtained following 10 mg infusions over 2 hours, prolonged infusions of 20 to 100 mg of T101 monoclonal antibody (1 to 2 mg/hr) resulted in less in vivo binding to the cell surface membranes of circulating and bone marrow cells for patients with B-CLL and CTCL. By 5 hours into the infusion, no greater than 15 percent of the cells demonstrated in vivo binding, and at the end of 12 hours virtually no in vivo binding was observed. This was due to nearly 100 percent modulation of T65 antigen secondary to this prolonged infusion. Furthermore, while T65 antigen expression declined, the expression of B-cell antigens (B1,BA1) and immunoglobulin remained unchanged in patients with B-CLL and other T-cell antigens such as Leu-4 (pan-T) and Leu-3 (T-helper) remained unchanged in patients with CTCL. It also was demonstrated that modulation was caused by rapid internalization of the T101-T65 antibody-antigen complex, followed by release of the antibody from the cells.[18]

THERAPEUTIC APPLICATIONS OF ANTIGENIC MODULATION: IMMUNOCONJUGATES

Antigenic modulation might be used to therapeutic advantage, particularly in a system in which there is rapid internalization of the antibody such as is found with T101. Numerous investigators are evaluating immunoconjugates of monoclonal antibodies coupled to toxins, drugs, and radioisotopes in animal models.[4] Data from our own animal model studies clearly demonstrate a far greater efficacy of antibody conjugated to toxins than unconjugated free antibody.[19,20] Many of these toxic substances, such as ricin, diphtheria, and abrin toxins, contain subunits that mediate binding to the target cells and independent subunits responsible for the toxic mechanism. In most cases, only the toxic subunit is coupled to the monoclonal antibody, and binding to the target cell is mediated through specific interaction of antibody to the appropriate antigen. In this situation, the ability of an antibody to induce antigenic modulation and internalization of the antibody-antigen complex may facilitate access of the drug or other toxic substance to its site of action within the cell and, therefore, augment the effectiveness of immunoconjugate therapy. The data presented in this study indicate that modulation of the T65 antigen is accompanied by internalization of antigen-antibody complexes and suggest that treatment of B-CLL and CTCL cells with T101 immunoconjugates under conditions that bring about rapid and extensive modulation of the T65 antigen may provide an effective means of therapy.

TOXICITY WITH UNCONJUGATED ANTIBODIES

The only major predictable complication witnessed in the NCI clinical trial with T101 was shortness of breath and chest tightness either during or immediately following the 2-hour infusion of T101 at dosages of 50 mg or greater.[9,12] Similar toxicity was reported by Dillman and coworkers also with the T101 antibody[8,11] and with anti-idiotype antibody therapy in patients with circulating lymphoma cells.[17] While this toxicity was transient and had no residual side effects, patients were extremely uncomfortable, and we were forced to stop therapy in all of the patients who experienced dyspnea. Chest x-rays and lung scans were normal in all of the patients except one whose lung scan showed a perfusion abnormality and another whose chest x-ray showed a pulmonary infiltrate. These abnormal findings resolved within one to two weeks. We, therefore, hypothesized that the rapid infusion of large quantities of monoclonal antibody, bound to circulating leukemia cells and/or normal T lymphocytes, led to leukoagglutination with the agglutinated cells then removed in the pulmonary microcirculation, causing pulmonary emboli and infarctions. There was no evidence that this pulmonary toxicity was caused by an anaphylactic reaction, as there was no response to epinephrine and measurable IgE levels were not demonstrated. Furthermore, some patients subsequently were treated with prolonged infusions of the same antibody without recurrence of these symptoms. Patients treated with rapid infusions (1 to 2 hours) of much greater dosages of the 9.2.27 antimelanoma monoclonal antibody (500 mg), which does not bind to any circulating cells, never developed this toxicity. We have eliminated completely this toxicity with T101 by infusing the antibody at rates of 1 to 2 mg/hr.

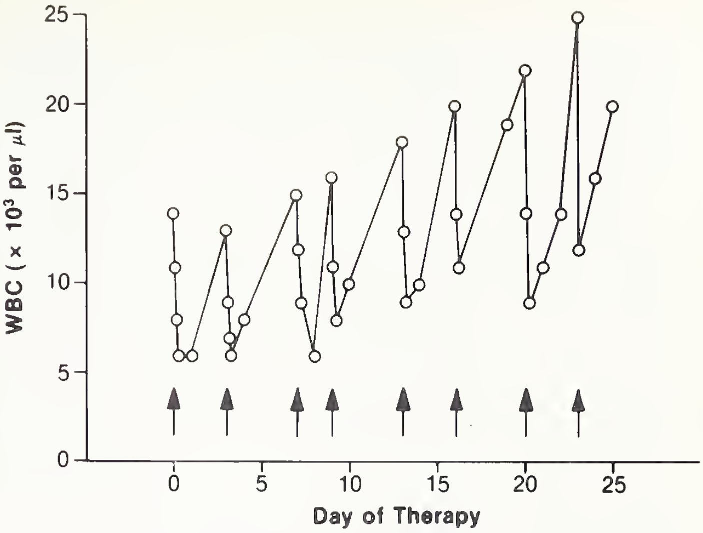

Figure 1— Response of circulating leukemia cells to infusion of T101. Arrows represent infusion of 50 mg of antibody. The solid line represents the absolute number of white blood cells (WBC) per microliter.

Rare patients have developed hypotension and tachycardia following the infusion of murine monoclonal antibody.[8,12] This complication most likely was anaphylactic and responded to administration of fluid and epinephrine. Therapy was stopped in all of the patients who developed this complication. Urticaria, also a reaction usually associated with anaphylactic immediate hypersensitivity, was quite common and rapidly responded to antihistamines. Patients developing urticaria were pretreated with antihistamines prior to subsequent treatment. Fever, chills, flushing, nausea, and vomiting have been reported but generally have been minor problems. Occasional patients have developed a transient reduction in their creatinine clearance and an elevation of their liver enzymes, probably due to immune complexes between the murine monoclonal antibody and circulating free antigen.[5,6]

ANTI-IDIOTYPE MONOCLONAL ANTIBODY

Another approach to the use of monoclonal antibody therapy is the use of anti-idiotype monoclonal antibodies. Immunoglobulin molecules have a unique region in their variable portion, termed the "idiotype." The idiotype for every immunoglobulin molecule is different. Since B-cell diseases are clonal, each tumor cell expresses the same immunoglobulin molecule; therefore, the idiotype theoretically is identical on every tumor cell. In this unique situation, the idiotype therefore is a tumor-specific antigen.

A group of investigators from Stanford developed a monoclonal antibody to the idiotypic determinant

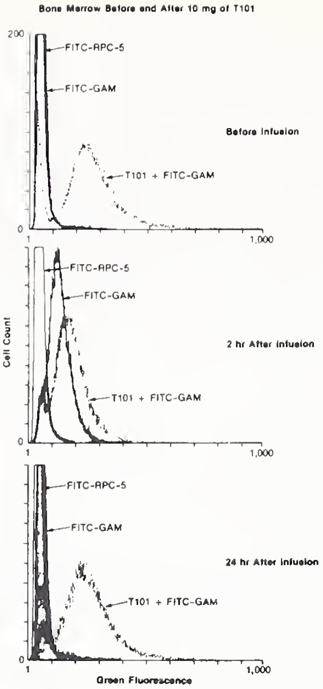

Figure 2— In vivo labeling of bone marrow cells with T101 antibody. Bone marrow cells were taken from the same patient before infusion of a 10-mg dose of monoclonal antibody, 2 hours after this infusion of 10 mg of T101, and 24 hours after infusion. The solid line represents staining with fluorescein isothiocyanate (FITC)-conjugated RPC-5 as a negative control. The shaded area represents in vivo bound T101 antibody identified by incubating the cells with FITC-conjugated goat antimouse (GAM) antiserum. The dotted line represents the same leukemia and bone marrow cells treated in vitro with excess T101 prior to the addition of the FITC-conjugated GAM anti-serum.

from a patient with a B-cell lymphoma who had become resistant to cytotoxic drugs and interferon.[16] This patient was treated with eight doses of anti-idiotype monoclonal antibody intravenously in a dose-escalation fashion, and he eventually entered a complete remission that has continued for over three years.[17] Additional patients have been treated at Stanford and in the Netherlands, with only partial remissions lasting from one to six months.[17,21] The mechanism of the antitumor activity of anti-idiotype antibodies is not known. One possibility is that anti-idiotypes have a direct antitumor effect. A likely additional factor is the activation of host effector mechanisms and the augmentation of an antitumor process already present in the host.

Our first patient treated with an anti-idiotype monoclonal antibody at the NCI was a patient with B-CLL and bulky lymphadenopathy.[22] He was treated sequentially with an IgG_{2b} antibody to a total dose of 1g and then an $1gG_1$ antibody to a total dose of 750 mg. There was no response because circulating idiotype (50 μg/ml) prevented binding of antibody to tumor cells. Although we were able to reduce the circulating idiotype level by 75 percent with plasmapheresis, we still were unable to identify murine antibody on circulating tumor cells.

A number of problems regarding anti-idiotype therapy must be addressed. Developing murine anti-idiotype antibodies is a labor-intensive project and is not practical on a large scale. It is hoped that this process can be refined as new technology is developed. In addition, anti-idiotype antibodies in our studies have been patient-specific and therefore can be used to treat only a single patient. It has been reported that some tumors are biclonal. This problem was identified using anti-idiotype antibodies and immunoglobulin gene rearrangement studies.[23,24] One approach to identifying patients with more than one clone prior to developing the anti-idiotype antibody would be to perform immunoglobulin gene rearrangement studies on all patients under consideration. If more than one clone is identified, then the patient either would not be a candidate for anti-idiotype therapy, or more than one antibody would have to be developed for that patient. Finally, it has been demonstrated that some idiotypes are unstable due to somatic mutation.[25,26]

CLINICAL TRIALS WITH IMMUNOCONJUGATES

A number of centers are studying toxin and drug conjugates with murine antibodies directed towards human malignancies and clinical trials have begun. Preclinical data suggest that this may be an important area of investigation.

Clinical trials using antisera or monoclonal antibodies conjugated to radionuclides for tumor imaging have been extensively studied, primarily in solid tumors. This subject has been reviewed.[27] Goldenberg and colleagues conjugated ^{131}iodine by the chloramine-T method to anti-CEA immunoglobulins (heteroantisera). In order to compensate for background radioactivity, ^{99m}Tc pertechnetate and serum albumin were injected before imaging with ^{131}iodine and anti-CEA.[28] The ^{99m}Tc radioactivity was subtracted from that of the ^{131}I. They have used these methods of radioimmunodetection in over 450 patients, using antibodies against a variety of hormones. No untoward effects have been observed in these subjects, who have received multiple injections of radioantibodies. The radioantibodies appear to have a high sensitivity for selectively detecting tumors. For instance, in colorectal cancer, they have shown a 91 percent overall true positive rate of cancer detection and localization for both primary and metastatic sites. It has been determined retrospectively that, in 11 of 51 colorectal cancer patients, tumors not revealed by other methods of detection were disclosed by their radioimmunodetection. The cause of failure to image a tumor was the presence of a lesion less than 2 cm in diameter or a malignancy that was devoid of CEA. In similar studies reported by Mach and coworkers,[29] positive scans were obtained in 41 percent of patients with CEA-producing tumors.

Monoclonal antibodies conjugated to ^{131}iodine, ^{123}iodine, and ^{111}indium currently are being studied by a number of investigators. Larsen and coworkers reported the results of imaging of 33 patients with advanced melanoma treated with ^{131}I-labeled Fab fragments specific for the p97 melanoma-associated antigen.[30] Mach and coworkers have investigated ^{131}I-labeled anti-CEA monoclonal antibodies.[31] Twenty-eight patients (26 with large bowel carcinomas) and 2 with pancreatic carcinomas were given injections of 0.3 mg of ^{131}I-labeled anti-CEA representing 1.0 to 1.5 mCi. In 14 of 28 patients, a radioactive spot corresponding to the tumor was detected 36 to 48 hours after injection. In 6 patients, the scans were question-able, and in the remaining 8 patients, they were entirely negative. Epenetos and coworkers labeled monoclonal antibodies with ^{123}iodine and demonstrated that the ^{123}I-antibody conjugate detected antigens on ovarian, breast, and gastrointestinal neoplasms.[32] They demonstrated specific localization and successful imaging in these patients.

At the NCI, we have imaged over 20 patients with CTCL, or melanoma with the T101 or 9.2.27 antibodies conjugated to ^{111}indium. Tumors as small as 0.5 cm have been localized; however, nonspecific uptake of the immunoconjugate in the liver and spleen have prevented critical evaluation of these organs. This problem has been somewhat circumvented by intracutaneous injection of the immunoconjugate so that it is taken up by the lymphatics to go directly to lymphatic sites of disease. This does not allow sufficient antibody to enter the circulation for visualization of extralymphatic disease.

Investigations of treatment with radionuclides conjugated to antibodies are underway. Some of the pioneering work in this area has been reported by Order et al.[33] ^{131}I-antiferritin heterologous antiserum was used in treating patients with hepatoma, and anti-CEA was used in the treatment of patients with enteropathic biliary cancer. Doses of ^{131}I-labeled antiferritin as high as 150 mCi were given in single injections. A total of 24 hepatoma patients were treated; 4 responded with partial responses. They have demonstrated that the hematologic toxicity is acceptable and that selective tumor targeting occurs despite the presence of ferritin in normal tissues and organs. The half-life could be increased by diluting the high specific labeled ^{131}I-anti-ferritin immunoglobulin with nonradioactive anti-ferritin immunoglobulin. Therapeutic trials with monoclonal antibodies have been reported by Larsen et al.[30] Patients were treated with ^{131}I-labeled Fab fragments of an antibody directed to the p97 melanoma-associated antigen. Seven selected patients were treated with a cumulative dose of 130 to 529 mCi of ^{131}iodine. While objective tumor regression was not reported, those doses were very well tolerated, and excellent tumor localization was seen. Bone marrow toxicity appeared to be the dose-limiting factor for the ^{131}I-anti-p97.

PURGING OF AUTOLOGOUS BONE MARROW WITH MONOCLONAL ANTIBODIES

Another attractive therapeutic approach using monoclonal antibodies is to "clean up" autologous bone marrow prior to bone marrow transplantation. Patients with ALL have had bone marrow removed and treated with the J5 monoclonal antibody that recognizes the common acute lymphoblastic leukemia antigen (CALLA) plus rabbit complement.[34] The combination of the anti-CALLA antibody plus complement selectively destroyed all cells in the bone marrow. Following bone marrow removal, treatment, and storage, patients were treated with high-dose chemotherapy and radiation therapy and then "rescued" with their J5 antibody-treated autologous bone marrow. A similar approach to therapy has been described using the pan-B reacting anti-B1 monoclonal antibody to clean up autologous bone marrow from patients with non-Hodgkin's lymphoma.[35] All of the lymphoma patients treated achieved a complete remission and had stable bone marrow engraftment by eight weeks. There was no major acute or chronic toxicity; B cells were detected by 2 months after transplantation and normal immunoglobulin levels were demonstrated by 6 months. Six of 8 patients were disease-free in unmaintained remission from 3 to 20 months after transplantation. The results of these trials are preliminary but clearly have demonstrated that antibody-treated autologous bone marrow is capable of restoring hematopoiesis. Long-term results will be necessary to determine whether these therapies have been successful.

CONCLUSION

The use of monoclonal antibody and antibody immunoconjugates in the treatment and radioimaging of leukemia and lymphoma is in its infancy. While much work needs to be done to clarify many of the issues surrounding the use of monoclonal antibodies, it clearly has been demonstrated in both animal tumor models and humans that antibody alone and antibody conjugates safely can be administered with minor adverse reactions and, in selected cases, have been shown to have therapeutic effects. Problems such as nonspecific localization of antibody responses, and antigenic heterogeneity are all major obstacles to safe and effective therapy with monoclonal antibodies. While anti-idiotype antibodies are highly specific for lymphoma/leukemic cells, and have demonstrated remarkable responses in a small number of patients, problems such as biclonality of some lymphomas, instability of the idiotype, and the difficulty in making "tailor-made" antibodies for individual patients clearly limit the role for anti-idiotype therapy. Purging of bone marrow with antibodies and complement (or coupled to toxins), at the moment, is limited to only a few diseases. However, in some studies, investigators have removed tumor cells in vitro from the bone marrow, the bone marrow has engrafted, and a number of patients have been rendered disease free for over two years. This may prove to be an important application of monoclonal antibody therapy and warrants further studies. This therapy, of course, bypasses most of the problems associated with intravenous infusion of monoclonal antibodies described above. Perhaps the most important future role for monoclonal antibody therapy will be in patients with minimal disease in the "adjuvant" setting, where antibody conjugates may localize and destroy micrometastatic deposits of tumor cells. We remain cautiously optimistic in exploring these exciting new approaches to cancer therapy.

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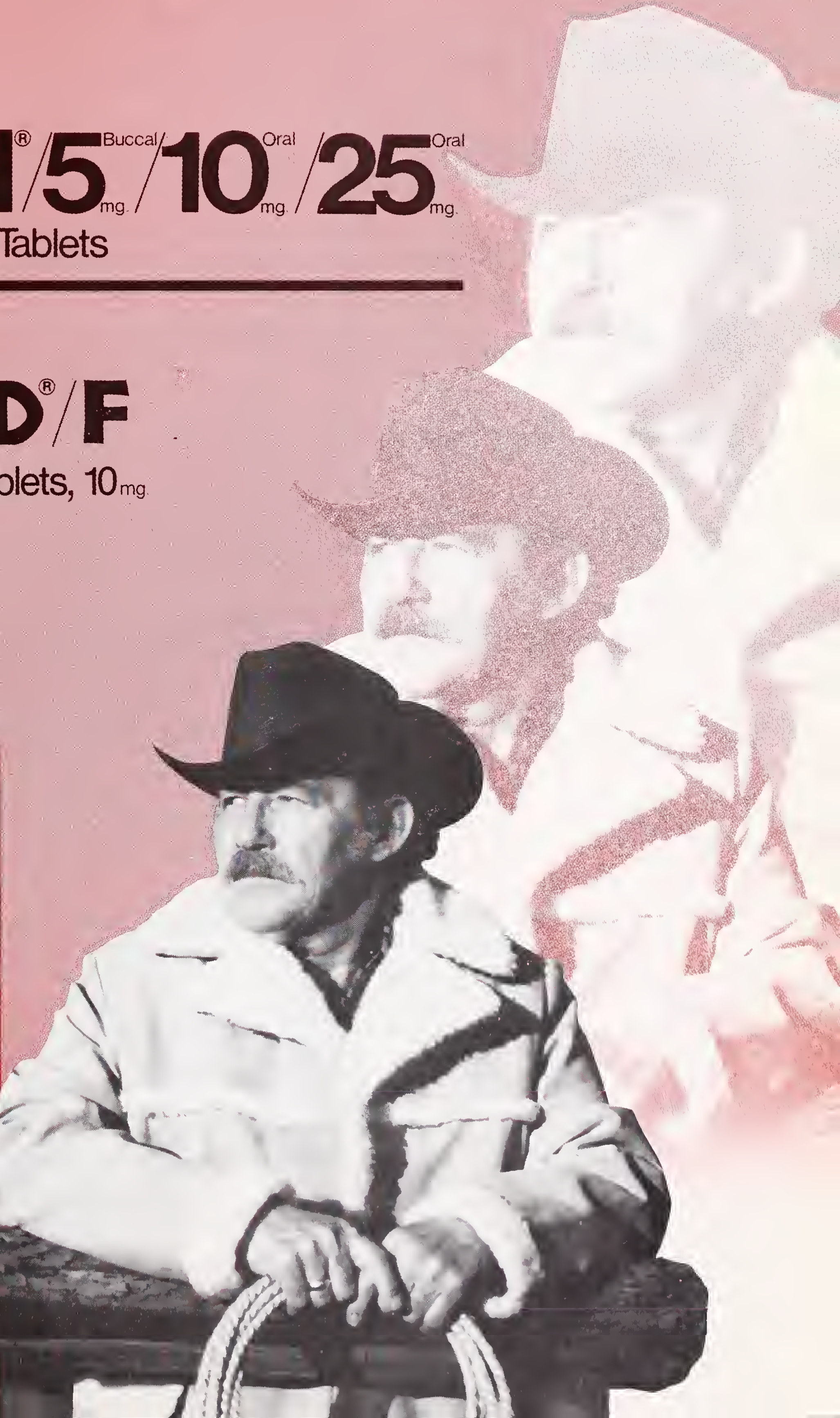

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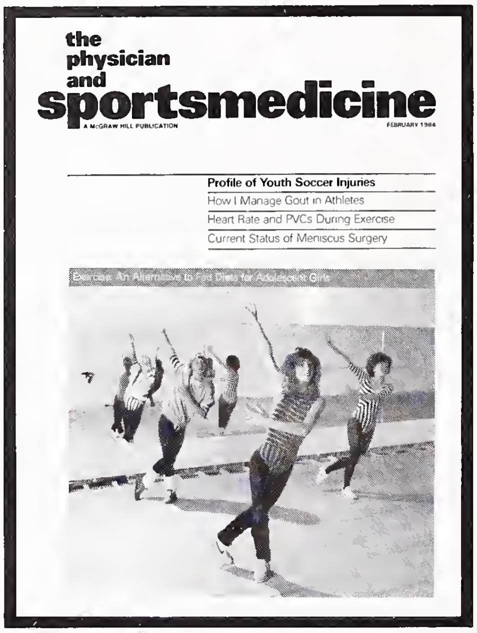

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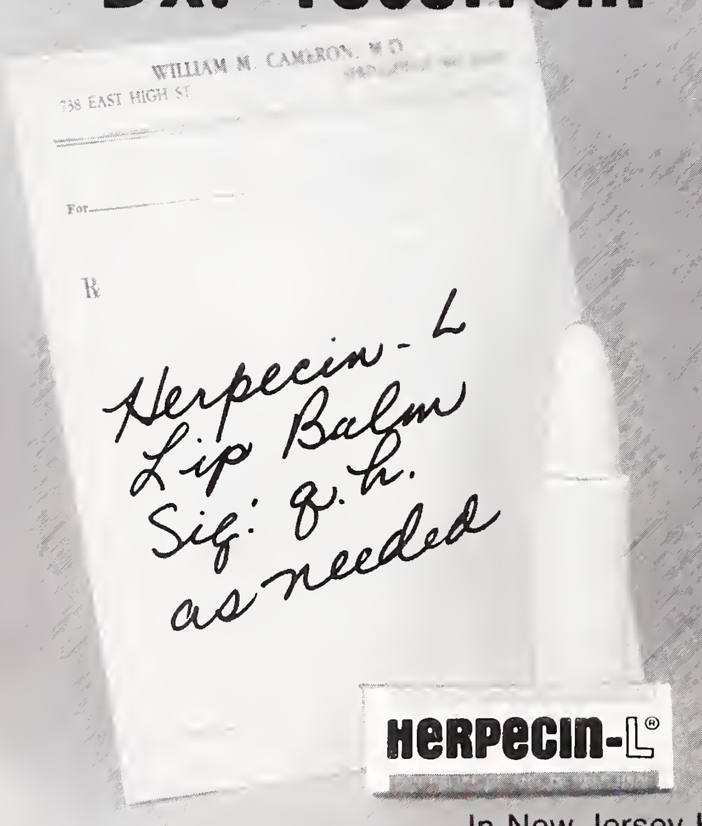

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DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; AMNJ Report; New Members; Physicians Seeking Location in New Jersey

Trustees' Minutes February 15, 1987

A regular meeting of the Board of Trustees was held on Sunday, February 15, 1987, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Report of the President . . . Noted that due to an increase in AMA membership in New Jersey, MSNJ is entitled to an additional delegate to the AMA; this brings the total to ten delegates and ten alternate delegates.

Report of Executive Director . . .
(1) MSNJ Paid Membership . . . Noted that as of February 11, 1987, there were 5,752 paid memberships.
(2) Financial Statements . . . Approved the financial statements for the period ending December 31, 1986.
(3) Regulatory Matters . . .
(a) Pronouncement of Death and Completion of Death Certificate—State Board Medical Examiners . . . Noted that SBME has appointed a special committee to meet with representatives of MSNJ and other interested parties to develop a pronouncement of death/certification of death format.
(b) Advertising Regulations . . . Noted that SBME has petitioned the Department of Health to adopt advertising regulations related to hospitals and health care facilities similar to the SBME ruling on physician advertising.
(c) Mandatory Continuing Medical Education Program . . . Informed that in all likelihood MSNJ, AMA, and national specialty society continuing medical education certificates will be acceptable to the SBME.
(4) Legislative Update . . .
(a) Tort Reform . . . Directed the President to send a communication to the membership, encouraging members to write letters to senators supporting tort reform legislation and to oppose the mandatory Medicare assignment bill, A-2511. Also, directed that staff investigate the practicality of forming a physician telephone chain communication mechanism in the state. And, noted that each member of the Board is requested to enroll as a sustaining member and wear the JEMPAC membership pin at the Annual Meeting.
(b) No Fault . . . Noted that there may be no further activity on the bill.
(c) Physical Therapy (A-2647) . . . Noted that MSNJ has been lobbying intensively against this bill and if the level of activity is maintained, MSNJ might be successful.
(d) Medicare . . .

(1) Mandatory Medicare Participation (A-2511) . . . Noted that this bill has been referred to committee.

(2) Medicare Services to Persons Receiving Pharmaceutical Assistance to the Aged and Disabled—PAAD (A-3305) . . . Informed that this bill provides for physicians to accept the Medicare fee determination when a patient presents a PAAD card and the bill exceeds $50.

(3) Regional Voluntary Efforts . . . Noted that a voluntary effort of providing access to quality medical care for financially disadvantaged senior citizens should be put forth throughout the state; presently, Ocean, Morris, and Union Counties provide such service.
(e) Physician Assistants/Certificate of Need for Physician Services . . . Will be advised of any legislative activity in these areas.
(f) HMO/Freedom of Choice . . . Noted that this bill relates to alternative health care delivery systems; it provides for beneficiaries to have free choice of provider. Noted that the Academy of Family Physicians expressed opposition to this bill. Will be advised of the outcome of a meeting between MSNJ and the Academy of Family Physicians.

UMDNJ . . . Received as informational a report from Dr. Stanley S. Bergen, Jr., highlighting the following: a meeting between MSNJ, PRO of New Jersey, Inc., New Jersey Association for Hospital Medical Education, and Dr. Bergen is scheduled for March; articles in *New England Journal of Medicine* detailing the changing climate of medical practice; UMDNJ's physician assistants program is number one in the nation; and radio announcements by the Robert Wood Johnson University Hospital are still under scrutiny.

NJ Hospital Association . . . Received as informational a report from Mr. Louis Scibetta; a section of the report questions an article stating that New Jersey Hospital Association might sponsor an HMO.

MSNJ Medical Student Association . . . Received as informational a report from the Student Association; Pamela Antoniuk, student member of the Board added the following: the proposed scholarship fund for financial support to students willing to participate in primary health care delivery programs in physician-shortage areas in the world was passed by the AMA; Scott Stoney is the chair of the MSS Long-Range Planning Committee and Jon Pincus serves on the Hunger Project Committee; and noted a caucus in April for the Northeast State delegations.

Academy of Medicine of New Jersey . . . Took note of the fact that Dr. Paul J. Hirsch will receive the Edward J. Ill Award presented by the Academy.

Committee on Membership Services . . .

(1) Gold Membercard Program . . . Approved the following recommendation:

> That the Medical Society of New Jersey endorse the Gold Membercard Program administered by Trans National Financial Services as a service to be offered to the membership.

(2) Prepaid Legal Services Program . . . Approved the following recommendation:

That the Prepaid Legal Services Program provided by Kern & Augustine be continued for 1987.

Committee on Utilization Review Systems . . .

(1) Legal Ramifications of PRO Quality Denial Letter . . . Approved the following recommendation:

That the model letter proposed by the Health Care Financing Administration for use in PRO quality denials be referred by the Medical Society of New Jersey to the AMA General Counsel for expedient legal action.

(2) State Board of Medical Examiners Involvement in Peer Review . . . Approved the following recommendation:

That a meeting be held with representatives from the Committee of Utilization Review Systems, the Peer Review Organization of New Jersey, Inc., and the New Jersey State Board of Medical Examiners, to recommend realistic limits on the extent to which the State Board of Medical Examiners should be involved in the peer review process.

Unfinished Business . . .

(1) Task Force on Negotiations—Resolution #28 (1986) . . . Requested the President to prepare a notice to be published in *NEW JERSEY MEDICINE* informing the membership that there are mechanisms with the Society to resolve disputes concerning health care.

(2) Status of New Jersey Urologic Society . . . Announced that the New Jersey Urologic Society has been unified behind the newly formed Urologic Society of New Jersey and is in the process of filing papers of incorporation; Dr. Arthur Ginsburg is the elected President and Dr. David R. Oshin is the elected Secretary-Treasurer.

New Business . . . Referred to the Judicial Council for study and report the recommendations calling for uniformity in structure and function of the county judicial committees.

221st MSNJ ANNUAL MEETING
Americana Host Farm Resort

Wednesday, April 29, 1987

3:30 P.M.—Board of Trustees' Meeting

Thursday, April 30, 1987

9:00 A.M.—Registration Opens
9:00 A.M.—Message Center Opens
2:00 P.M.—House of Delegates
4:00 P.M.—Reference Committees

Friday, May 1, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
9:00 A.M.—House of Delegates (election)
12:00 NOON—Golden Merit Award Ceremony followed by Reception
2:30 P.M.—Reference Committees
5:00 P.M.—JEMPAC Political Forum
5:45 P.M.—JEMPAC Wine and Cheese Reception

Saturday, May 2, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center and Exhibits Open
8:30 A.M.—House of Delegates
1:30 P.M.—House of Delegates
6:00 P.M.—Inaugural Reception followed by Inaugural Dinner

Sunday, May 3, 1987

8:00 A.M.—Registration Opens
8:00 A.M.—Message Center Opens
8:30 A.M.—General Session: "The Impact of Health Care Rationing on Physician Autonomy—The Cases of Generic Substitution and DRGs"
1:00 P.M.—Board of Trustees' Meeting

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.
President

In September, the state's second lithotripter—and the first in northern New Jersey—is scheduled to begin operation on the Newark campus of UMDNJ. Ground officially was broken on February 18 for the facility, which is a joint venture of Saint Barnabas Medical Center in Livingston and UMDNJ-University Hospital.

This is an exciting development for a number of reasons, beginning with the benefits to New Jersey patients in having increased access to this revolutionary method of eliminating kidney stones through powerful, water-borne shock waves.

The opening of The Stone Center, as the facility will be called, advances several of the high-priority goals of the University. It brings state-of-the-art technology to New Jersey, to the advantage of patients, physicians, students, and the state's economy.

The Stone Center will benefit patients by reducing the duration and cost of their hospitalization, and reducing the trauma and potential danger of kidney stone treatment. A patient who undergoes conventional kidney stone surgery typically will spend a week or two in the hospital, followed by four to six weeks of painful recovery. Lithotripsy patients, on the other hand, often can return to their normal activities within a few days of the hour-long procedure. The procedure itself is painless, although the patients often experience some discomfort as they eliminate the pulverized kidney stone particles.

The facility will benefit physicians by giving them the opportunity to treat their own patients with the lithotripter. Physicians who are lithotripsy certified through an approved American Urological Association course will be invited to apply for privileges at The Stone Center. The Center eventually hopes to offer its own training program.

Students will benefit because the lithotripsy service will be integrated into the medical education programs conducted at the two hospitals by the UMDNJ-New Jersey Medical School, which runs the state's only postgraduate training program in urology.

The state economy will benefit both directly and indirectly. The direct benefit comes because New Jersey kidney stone patients will be able to spend their health-care dollars in New Jersey, rather than traveling to New York or Philadelphia for lithotripsy treatment.

The indirect benefit is more subtle, yet just as important, in that it illustrates a broad mission of University. The future vitality of the state's economy is dependent on high-technology industries. A key reason for the existence of UMDNJ is to enhance the state's image as a place where high-tech development will be welcomed and nurtured. Every time the state strengthens its position on the cutting edge of medical technology, it helps to pave the road for attracting future development.

The Stone Center will be operated by University Lithotripsy Affiliates, Inc., a nonprofit corporation formed last year by UMDNJ-University Hospital and Saint Barnabas Medical Center. The corporation is governed by a board of trustees equally representative of Saint Barnabas and UMDNJ. The facility is the first joint undertaking by the two institutions since a major affiliation agreement was signed last year. Saint Barnabas Hospital and UMDNJ are planning or considering other joint ventures in the areas of geriatrics, drug abuse treatment, and cardiac surgery.

AMNJ Report

Arthur Krosnick, M.D.
President

The Board of Trustees of the Academy of Medicine of New Jersey has named the 1987 recipients of the Awards which will be presented at our Annual Awards Dinner on Wednesday, May 27, 1987, to be held at the Chanticler in Short Hills.

Paul J. Hirsch, M.D., will receive the Edward J. Ill Award "presented annually to that physician of New Jersey who merits recognition by the Academy for distinguished service as a leader in the medical profession and in the community at large." Recent recipients have included Drs. James Todd, Leon G. Smith, Arthur Krosnick, Alfred Alessi, Stanley Bergen, and Palma Formica. Dr. Hirsch is best known for his numerous contributions to organized medicine. He is a past president of the New Jersey Orthopaedic Society and the Academy of Medicine of New Jersey and was the founding president of the New Jersey Association of Medical Specialty Societies. He is serving the Medical Society of New Jersey as second vice-president and is a Councilor to the American Academy of Orthopaedic Surgeons from New Jersey.

1987 MSNJ MEMBERSHIP DIRECTORY

The 1987 **Membership Directory** of the Medical Society of New Jersey is available. The issue contains all vital statistics on the membership of the Medical Society of New Jersey as well as information on most hospitals in the Garden State.

All members receive a free copy. Additional copies are available for $50 plus sales tax. Please complete the form and submit with payment for quick delivery.

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Mail check: MSNJ, Two Princess Road, Lawrenceville,
NJ 08648.

The Academy's Citizen's Award is "presented annually to that citizen or group of citizens of New Jersey who merit recognition by the Academy for distinguished service in the interest of the health and welfare of the community at large." The 1987 Citizen's Award has been granted to Ms. Mary Strong. Ms. Strong is chairperson of the Citizens' Committee on Biomedical Ethics, Inc. Under her leadership, this grassroots movement has been successful in giving New Jerseyans a more effective voice in the creation of public health-care policy and the allocation of limited economic resources.

The Academy's Roving Symposia series continues to be a successful adjunct to our CME program. In fact the 1986-1987 year is experiencing a sizeable increase in hospital requests for speakers. This situation has created problems for staff in finding enough speakers to satisfy the demand. Physicians who are interested in speaking on behalf of the Academy are asked to contact Ms. Dana Davies.

The Academy held a major symposium on Medicolegal Problems in Obstetrical and Gynecological Ultrasound on Saturday, March 21, 1987, at the UMDNJ-Robert Wood Johnson Medical School in Piscataway. The meeting was cosponsored by the New Jersey Institute of Ultrasound in Medicine and the New Jersey Obstetrical and Gynecological Society. The discussions included the current extent of the malpractice crises in ultrasound in the United States and locally in New Jersey, guidelines in the proper utilization and practice of obstetrical and gynecologic ultrasound, and other emerging legal issues in ultrasound.

The speaker for the Academy's First Wednesday program for March was Mr. Joseph Katz, Lobbyist for the Medical Society of New Jersey.

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Robert M. Liegner, M.D., Newton

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Alan L. Kalischer, M.D., Westfield
Mark J. Krawitz, M.D., Warren
Jayati Mukhopadhay, M.D., Irvington
Kathleen A. Murphy, M.D., Rahway
Homer L. Nelson, M.D., Elizabeth
Christopher J. Ostromecki, M.D., Summit
Gregory A. Parker, M.D., Elizabeth
Anjana N. Shah, M.D., Plainfield
Douglas H. Singer, M.D., Scotch Plains
Andrew B. Weinberger, M.D., Elizabeth

Warren County

Kishor Kumar G. Nar, M.D., Phillipsburg

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ALLERGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, clinical immunology. Solo or partnership. Available July 1987.

ANESTHESIOLOGY—Lee A. Balaklaw, M.D., 575 Easton Ave., Apt. 6M, Somerset, NJ 08873. Far Eastern University (Philippines) 1980. Board eligible. Group or partnership. Available July 1987.

Alan Miller, M.D., 260 First St., Apt. C13, Mineola, NY 11501. Eastern Virginia 1982. Board eligible. Group or partnership. Available July 1987.

ENDOCRINOLOGY—Issac Sachmechi, M.D., 61-55 98th St., #16B, Rego Park, NY 11374. Technion 1980. Also, internal medicine. Board eligible. Board certified (IM). Group or partnership. Available July 1987.

FAMILY MEDICINE—Kenneth W. Cartaxo, M.D., 3 Roosevelt Ave., West Orange, NJ 07052. Guadalajara 1980. Board certified. Group or partnership. Available.

Raymond L. Ebarb, M.D., 61-14th Ave., West Babylon, NY 11704. Guadalajara 1982. Board eligible. Group or partnership. Available July 1987.

IMMUNOLOGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, allergy. Solo or partnership. Available July 1987.

INTERNAL MEDICINE—Jae Hong, M.D., 90-17 52nd Ave., Elmhurst, NY 11373. Seoul National (Korea) 1982. Board eligible. Partnership or group. Available July 1987.

Harvey Mossman, M.D., 120 Marcellus Rd., #2U, Mineola, NY 11501. Med. Coll. of Pa. Board eligible. Group, partnership, solo. Available July 1987.

Christopher J. Nickerson, M.D., 421

Conrad Rd., Englewood, NJ 07631. Milan (Italy) 1977. Board certified. Group, partnership, solo. Available.

Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, pulmonary. Board certified. Group or partnership. Available July 1987.

Issac Sachmechi, M.D., 61-55 98th St., #16B, Rego Park, NY 11374. Technion 1980. Also, endocrinology. Board certified. Board eligible (ENDOCRIN). Group or partnership. Available July 1987.

Arvind Viradia, M.D., 101 Madison Rd., Parsippany, NJ 07054. NHL Municipal (India) 1982. Group, partnership, solo. Available.

NEUROLOGY—M.E. Dughly, M.D., 9001 Ridge Ave., Unit 28, Philadelphia, PA 19128. Damascus (Syria) 1974. Board eligible. Group, partnership, solo, hospital. Available.

OBSTETRICS/GYNECOLOGY—Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. Texas (San Antonio) 1983. Board eligible. Group or partnership. Available July 1987.

Michael A. Schiavone, M.D., 447 Linwood Ave., Buffalo, NY 14209. Pittsburgh 1982. Group, partnership, solo. Available July 1987.

Lee Anthony Tripp, M.D., 541 Brinton St., Philadelphia, PA 19144. Temple 1981. Board eligible. Solo or partnership. Available.

PULMONARY—Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

PSYCHIATRY—Arthur Dworetz, M.D., 2355 Tilbury Ave., Pittsburgh, PA 15217. North Carolina 1983. Board eligible 1987. Group, partnership, solo. Available July 1987.

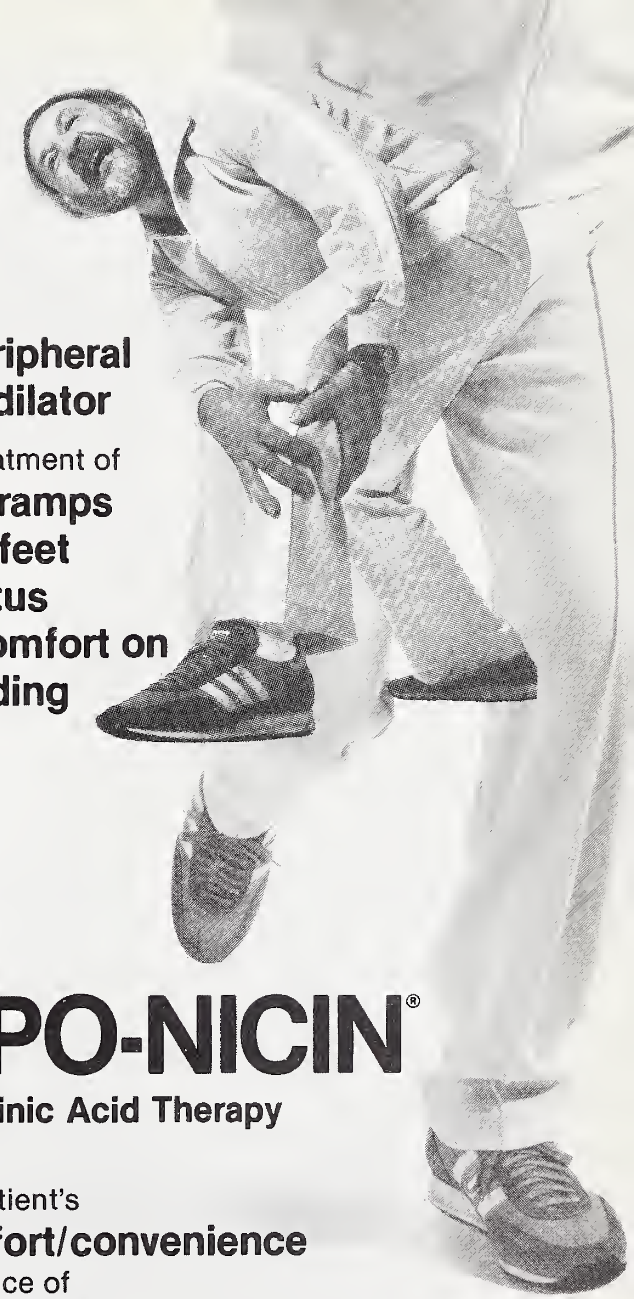
PULMONARY—Allen J. Salm, M.D., 3270 Warrensville Ctr. Rd., Apt. 210, Shaker Heights, OH 44122. Case Western Reserve (1985). Board eligible. Group, partnership, solo. Available July 1987.

SURGERY—Peter H. Block, M.D., 1332 Weathervane Ln., Apt. 2A, Akron, OH 44313. New York Medical 1982. Board eligible. Group or partnership. Available July 1987.

Mohamad S. Hashim, M.D., 200 Trenton Rd., Box 742, Browns Mills, NJ 08015. Damascus (Syria) 1977. Solo, partnership, clinic, hospital. Available May 1987.

Millard D. Strutin, M.D., 369 Mountain Ave., Springfield, NJ 07081. Rome 1981. Board eligible. Solo. Available.

Dorian J. Wilson, M.D., 28 Diana Dr., South Plainfield, NJ 07080. UMDNJ 1982. Board eligible. Hospital staff, medical school affiliate. Available July 1987.



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HOUSING APPLICATION
221st ANNUAL MEETING
THE MEDICAL SOCIETY OF NEW JERSEY

THURSDAY, APRIL 30, TO SUNDAY, MAY 3, 1987

THE FOLLOWING ARE ALL-INCLUSIVE PACKAGE PLANS BASED ON MODIFIED AMERICAN PLAN, INCLUDING DINNER AND BREAKFAST DAILY STARTING WITH DINNER ON THE DAY OF ARRIVAL, THE SATURDAY NIGHT BANQUET, LIVE CABARET SHOWS EACH EVENING FEATURING A DIFFERENT SHOW EVERY NIGHT, STATE SALES TAX, AND ALL GRATUITIES COVERING BELLMEN FOR IN/OUT LUGGAGE SERVICE, CHAMBERMAIDS, AND ALL MEAL SERVICE AS OUTLINED:

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- Fill out only one form for each room required.
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CHECK TYPE OF ROOM REQUIRED: ☐ SINGLE OCCUPANCY ☐ DOUBLE OCCUPANCY

PLEASE NOTE: Number of persons attending the Inaugural Dinner-Dance honoring President-Elect and Mrs. Harry M. Carnes on Saturday, May 2, 1987 ____________

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NAME: ______________________ NO. of CHILDREN: ____________

SHARING ROOM WITH: ______________________ CHILDREN'S AGES: ____________

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CITY: ______________ STATE: ______________ ZIP: ____________

BUSINESS PHONE NO. ______________ HOME PHONE NO. ______________

CHECK IF OFFICIAL DELEGATE ☐ COUNTY: ______________

ARRIVAL DATE ____________ DAY ____________

DEPARTURE DATE ____________ DAY ____________

CHECK-IN: AFTER 4 PM
CHECK-OUT: BY 12 NOON

MEDICAL SOCIETY OF NEW JERSEY—221st ANNUAL MEETING

#13242

LOCATION MAP

Americana Host Farm Resort

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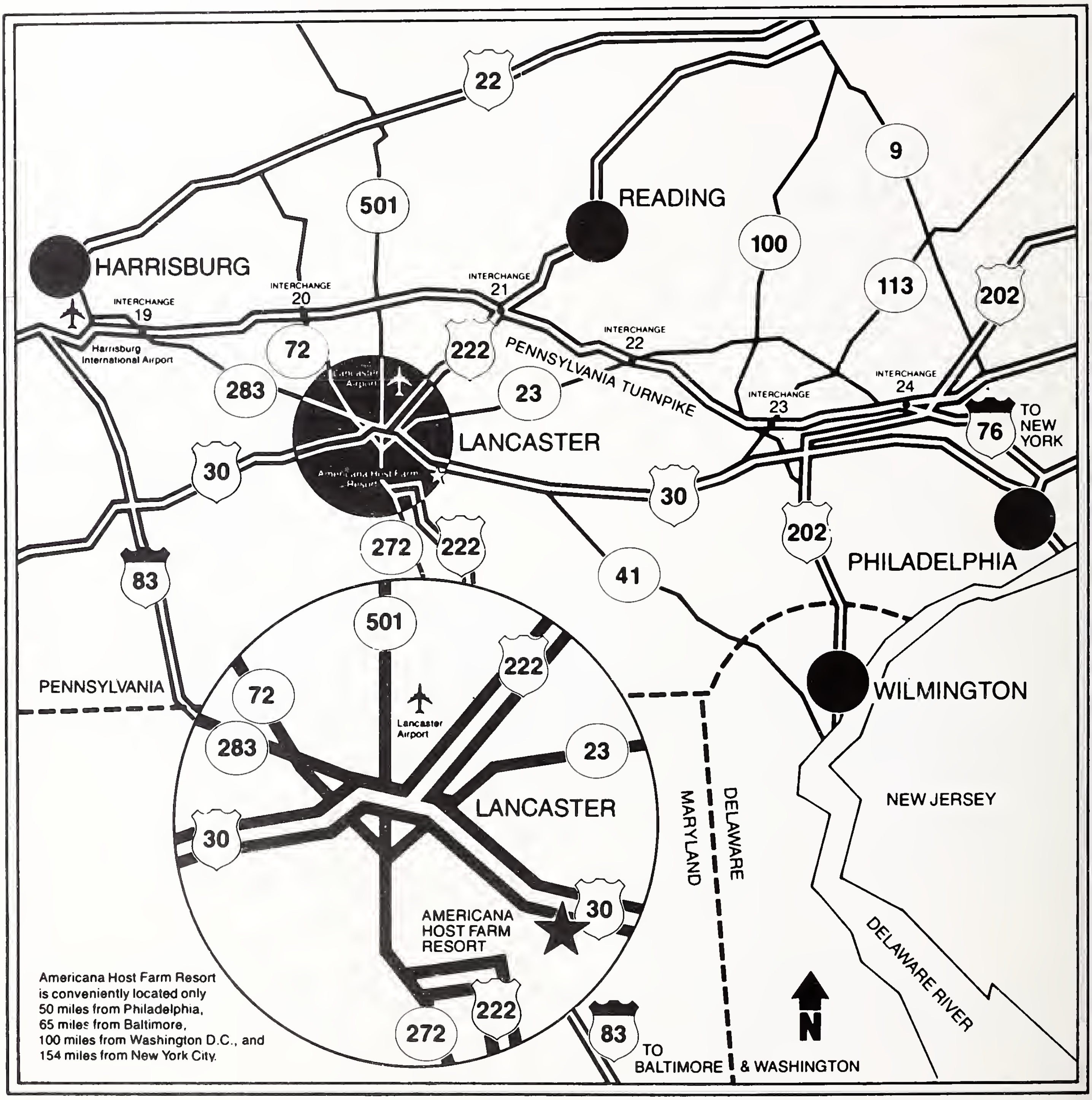

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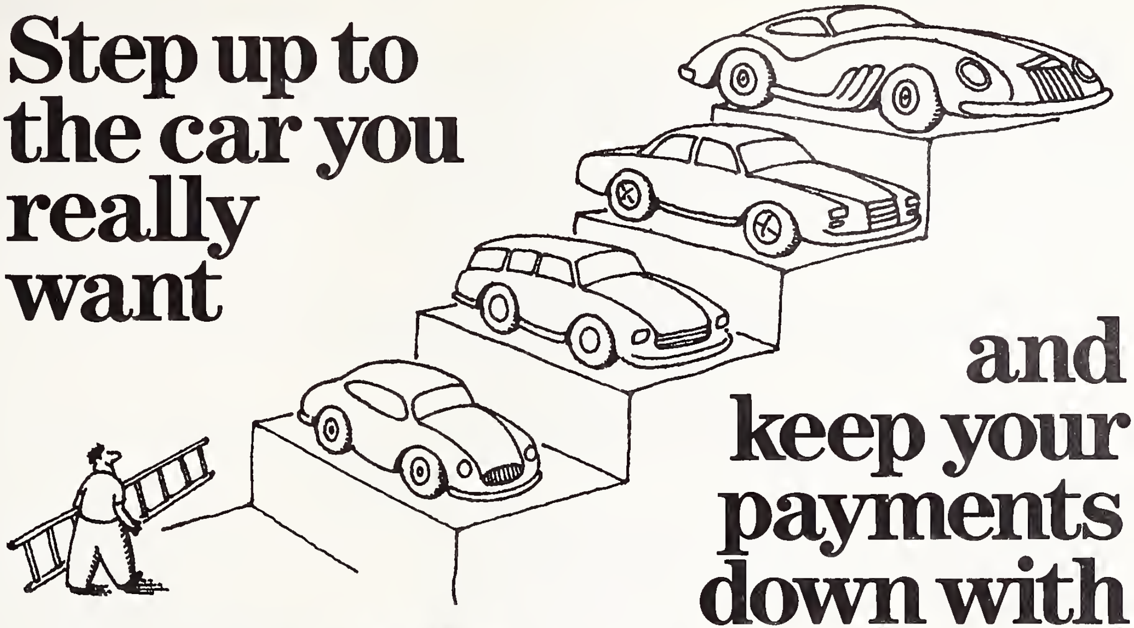

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WEDNESDAY

MAY 6, 1987
3:00 to 5:30 PM

DIAGNOSIS AND MANAGEMENT OF SIMPLE AND COMPLEX ARRHYTHMIAS

MODERATOR: LEONARD HOROWITZ, M.D.

Diagnosis and Therapy for Supraventricular Arrhythmias	*Harry Kopelman, M.D.*
Diagnosis and Therapy for Ventricular Arrhythmias	*Leonard Horowitz, M.D.*
Case Presentations	*Steven Klier, M.D.*
Ablation Procedures and Pacemakers for Cardiac Arrhythmias	*W. Clark Hargrove, M.D.*
Questions and Answers	*The Audience*

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CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

This list is compiled through the cooperation of the Committee on Medical Education of the Medical Society of New Jersey, The Academy of Medicine of New Jersey, the New Jersey Chapter of the American Academy of Family Physicians, and the Office of Continuing Medical Education of the UMDNJ. For information on accreditation, please contact the sponsoring organization(s), indicated by italics—last line of each item.

ANESTHESIOLOGY

May

4 **Lecture Series**
11 7:45 A.M.—Newark Beth Israel
18 Medical Center, Auditorium,
25 Newark
(UMDNJ and Newark Beth Israel Medical Center)

6 **Anesthesiology Case Presentation**
7:15 A.M.—Robert Wood Johnson Medical School, New Brunswick
(UMDNJ)

6 **Anesthesiology Grand Rounds**
13 4 P.M.—100 Bergen Street, Newark
20 *(UMDNJ)*
27

June

1 **Lecture Series**
8 7:45-8:45 A.M.—Newark Beth Israel
15 Medical Center, Auditorium,
22 Newark
29 *(UMDNJ and Newark Beth Israel Medical Center)*

3 **Anesthesiology Grand Rounds**
10 4 P.M.—100 Bergen St., Newark
17 *(UMDNJ)*
24

CARDIOLOGY

May

6 **Cardiology Update**
13 **Seizures**
8:30-10 A.M.—Alexian Brothers Hospital, Grassman Hall, Elizabeth
(Alexian Brothers Hospital and AMNJ)

June

3 **Advances in Cardiology**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

9 **University Echo Club**
7:30 P.M.—University Hospital, Rm. H349, Newark
(UMDNJ)

MEDICINE

May

1 **Grand Rounds—Rehabilitation Medicine**
1:30-2:30 P.M.—New Jersey Medical School, Newark
(UMDNJ)

1 **Pseudomembranous Ulcerative Colitis**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

1 **Current Use of Plasmapheresis**
8 **Management and Treatment of the Adult Asthmatic**
15 **Hypo and Hyperkalemia**
22 **Pathology of AIDS in Children**
29 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

1 **Department of Medicine**
15 **Grand Rounds**
9-10:00 A.M.—St. Francis Medical Center, Crean Hall
(St. Francis Medical Center and AMNJ)

1 **Pain Management Center**
8 8 A.M.—100 Bergen Street, Newark
15 *(UMDNJ)*
22
29

1 **Urology Basic Science Conference**
8 3-4 P.M.—New Jersey Medical
15 School, Rm. C-600, Newark
22 *(UMDNJ)*

1 **Urology Grand Rounds**
8 4-6 P.M.—New Jersey Medical
15 School, Newark
22 *(UMDNJ)*
29

4 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Science Center, Rm. 393, New Brunswick
(UMDNJ)

4 **University Hospital Tumor**
11 **Conference**
18 8 A.M.—University Hospital, Newark
25 *(UMDNJ)*

5 **Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical School, Lecture Hall 102, New Brunswick
(UMDNJ)

5 **Pulmonary Conference**
12 8-9 A.M.—University Hospital,
19 Rm. H-349, Newark
26 *(UMDNJ)*

6 **Adrenal Diseases**
1:30 P.M.—Essex County Hospital Center, Cedar Grove
(AMNJ)

6 **Cancer and Emotions**
8 P.M.—Auditorium, N.J. State Museum, Trenton
(Rose Kline Memorial Foundation)

6 **Lecture Series 1986-1987**
13 10:30 A.M.-12 noon—Christ
20 Hospital, Jersey City
27 *(AMNJ)*

6 **New Concepts in the Management of Coronary Artery Disease**
13 **Academy of Medicine Guest Lecture**
20 **Newer Approaches to the**
27 **Treatment of Mild Hypertension**
12 noon-1 P.M.—Medical Education Building, Rm. 102, New Brunswick
(UMDNJ)

6 **Common Dermatoses**
10:30 A.M.—St. Mary's Hospital, Passaic
(AMNJ)

6 **Continuing Education Series**
20 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant Valley Way, West Orange
(UMDNJ and Kessler Institute for Rehabilitation, Inc.)

7 **Allergy, Immunology, and**
14 **Infectious Diseases**
21 11:00 A.M.—Children's Hospital,
28 Newark
(UMDNJ and Children's Hospital)

7 **Blood Bank Conferences**
14 4 P.M.—University Hospital,
21 Rm. C-128, Newark
28 *(UMDNJ)*

7 **Urology Grand Rounds**
14 3-5 P.M.—Robert Wood Johnson
21 Medical School, Medical Education
28 Building, Rm. 108-A, New Brunswick
(UMDNJ)

7 **Assessment and Differentiation of Acute vs Chronic Pain**
11 A.M.-12 noon—St. Joseph's Hospital and Medical Center, Paterson
(St. Joseph's Hospital and Medical Center)

8 **Pulmonary Embolus**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

8 **Diagnosis and Treatment of Rheumatoid Arthritis**
11:30-12:30 P.M.—Overlook Hospital, Auditorium, Summit
(AMA and AMNJ)

8 **Sun Exposure, Skin Cancer Screening**
12 noon—Warren Hospital, Phillipsburg
(AMNJ)

11 **Dermatoses of the Skin**
7 P.M.—Wallkill Valley General Hospital, Sussex
(AMNJ)

THE ANNUAL AWARDS DINNER OF THE ACADEMY OF MEDICINE OF NEW JERSEY

will be held on

WEDNESDAY, MAY 27, 1987
at The CHANTICLER
in SHORT HILLS, NEW JERSEY

1987 Edward J. Ill Award Recipient
PAUL J. HIRSCH, M.D.

1987 Citizens Award Recipient
MARY STRONG

Further information can be obtained by contacting the Academy of Medicine of New Jersey at 1-609-896-1717.

June 13, 1987

7TH ANNUAL ADVANCES IN GASTROENTEROLOGY

Bally's Park Place Hotel
Atlantic City, New Jersey

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THE MEDICAL HISTORY SOCIETY OF NEW JERSEY

and

THE ACADEMY OF MEDICINE OF NEW JERSEY

present the

Annual Morris H. Saffron Lecture

Wednesday, May 6, 1987
1:00 P.M.

"American Medical Education: Past, Present, and Future"

Kenneth M. Ludmerer, M.D.
Associate Professor of Medicine

and

Associate Professor of History
Washington University

at the

MSNJ Headquarters Building
Lawrenceville, New Jersey

For further information contact:

Academy of Medicine of New Jersey
Two Princess Road
Lawrenceville, NJ 08648

609-896-1717

12 **Ophthalmology: Associated with Systemic Disease**
12 noon-1 P.M.—The Hospital Center of Orange, Orange
(AMNJ)

12 **Menopause**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

12 **NJ Dermatological Society**
6:30 P.M.—Chanticler, Millburn
(AMNJ)

12 **University Echo Club**
7:30 P.M.—University Hospital, Rm. H-349, Newark
(UMDNJ)

13 **Coronary Artery Disease Risk in Antihypertensive Therapy**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

14 **Preoperative Nutritional Support**
7:30 A.M.—West Jersey Health System, Camden
(AMNJ)

14 **Current Clinical Concepts in Rheumatology/Immunology**
12:15-1:15 P.M.—Kennedy Memorial Hospital, Conference Rm.
(UMDNJ)

15 **Pancreatic Transplants and Genetic Engineering in Diabetes**
12 noon-1:15 P.M.—Bridgeton Hospital
(Bridgeton Hospital and AMNJ)

19 **Endocarditis**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

19 **Evaluation and Therapy of the Newly Discovered Hypertensive**
4-5 P.M.—Robert Wood Johnson Medical School, Rm. 393, New Brunswick
(UMDNJ)

19 **IVP Conference**
4-6 P.M.—New Jersey Medical School, Rm. C-600, Newark
(UMDNJ)

20 **Dermatology Conferences**
6-9 P.M.—Rutgers Community Health Plan, 57 U.S. Highway #1, New Brunswick
(UMDNJ)

20 **Interhospital Rheumatology Rounds**
4:30-6 P.M.—University Hospital, Rm. I-355, Newark
(UMDNJ)

20 **Regional Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson Medical School, New Brunswick
(UMDNJ)

20 **Reversible Airway Disease**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

21 **20th Annual CME Series 1986-1987**
5-6:30 P.M.—Somerset Medical Center, Auditorium, Somerville
(AMNJ and Somerset Medical Center)

21 **Burns: Current Treatment**
2 P.M.—John E. Runnells Hospital, Berkeley Heights
(AMNJ)

21 **Functional Assessment of the Elderly**
3 P.M.—Ancora Psychiatric Hospital, Hammonton
(AMNJ)

26 **The Spectrum of Epstein-Barr Virus Infections/State of the Art**
8:30-10:30 A.M.—St. Joseph's Hospital and Medical Center, Johnson Auditorium, Paterson
(St. Joseph's Hospital and Medical Center)

26 **Vaginal Discharge and P.I.D.**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

28 **Visiting Professor Program**
4-5 P.M.—St. Barnabas Medical Center, Classroom A, Livingston
(AMNJ and St. Barnabas Medical Center)

June

1 **University Hospital Tumor**
8 **Conference**
15 8 A.M.—University Hospital,
22 Rm. H349, Newark
29 *(UMDNJ)*

2 **Pulmonary Conference**
9 8-9 P.M.—University Hospital,
16 Rm. H349, Newark
23 *(UMDNJ)*
30

2 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Science Ctr., Rm. 393, New Brunswick
(UMDNJ)

3 **Continuing Education Series**
17 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant Valley Way, West Orange
(Kessler Institute for Rehabilitation)

3 **Lecture Series: 1986-1987**
10 10:30-12 noon—Christ Hospital,
Jersey City
(AMNJ)

3 **Symposium on Gastroenterology and Infectious Disease**
9-4 P.M.—Overlook Hospital, Auditorium, Summit
(AMNJ)

4 **Blood Bank Conference**
11 4-5 P.M.—University Hospital,
18 Rm. C-128, Newark
25 *(UMDNJ)*

4 **Allergy, Immunology, and**
11 **Infectious Diseases**
18 11-12 P.M.—Children's Hospital,
25 Newark
(UMDNJ)

4 **20th Annual CME Series:**
11 **1986-1987**
18 5-6 P.M.—Somerset Medical Center,
Somerville
(AMNJ)

5 **Rehabilitation Medicine Grand Rounds**
1:30-2:30 P.M.—New Jersey Medical School, Newark
(UMDNJ)

5 **Asbestosis**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

5 **Non-operative Management of Chronic Back Pain**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

5 **Urology Basic Science Conference**
12 3-4 P.M.—New Jersey Medical
19 School, Room C600, Newark
26 *(UMDNJ)*

5 **Urology Grand Rounds**
12 4-6 P.M.—New Jersey Medical
19 School, Newark
26 *(UMDNJ)*

5 **Pain Management Center**
12 8 A.M.—100 Bergen St., Newark
19 *(UMDNJ)*
26

9 **Diabetes**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

10 **Emergency Center Triage in Trauma Cases**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

12 **Current Clinical Concepts in Rheumatology/Immunology**
12:15-1:15 P.M.—Kennedy Memorial Hospital, Conference Rm.
(UMDNJ)

12 **Current Status of Vasodilator Therapy in LV Failure**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

16 **Cyclosporine Nephrotoxicity**
4-5 P.M.—Robert Wood Johnson Medical School, Rm. 393, New Brunswick
(UMDNJ)

17 **Regional Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson Medical Center, Rm. 108B, New Brunswick
(UMDNJ)

17 **The Future of Transplantation**
12 noon-1 P.M.—Robert Wood Johnson Medical Center, Medical Education Building, Rm. 102, New Brunswick
(UMDNJ)

17 **Interhospital Rheumatology Rounds**
4:30-6 P.M.—University Hospital, Rm. I-355, Newark
(UMDNJ)

17 **Current and Future Approaches to Therapy of Parkinson's Disease**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

18 **Hot Tips from the Journals 1986-1987**
5-6:30 P.M.—Somerset Medical Center, Fuld Auditorium, Somerville
(Somerset Medical Center and AMNJ)

Presbyterian-University of Pennsylvania Medical Center

presents

The First Annual Educational Conference

"When to Treat vs. When to Refer: Optimal Patient Care in the High Technology Era"

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Saturday, May 9, 1987
8:30 a.m.-4 p.m.

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39th and Market Streets
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The University of Pennsylvania School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians. The University of Pennsylvania School of Medicine designates this Continuing Medical Education activity for 5 credit hours in Category I of the Physician's Recognition Award of the American Medical Association.

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R.S.V.P. to the Department of Continuing Medical Education by May 1, 1987 at (215) 662-8938.

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CARDIOLOGY TODAY

May 27, 1987

"Management of Congestive Heart Failure"

MODERATOR: WILLIAM S. FRANKL, M.D.

4:00 PM	DIAGNOSIS: IMAGING	*Gary S. Mintz, M.D.*
4:30 PM	STANDARD THERAPY	*Bruno Manno, M.D.*
5:00 PM	NEWER THERAPY	*Mariell J. Likoff, M.D.*
5:30 PM	DIALYSIS	*Charles Swartz, M.D.*

Designed for the physician in practice faced with the care of critically ill patients.

CME CATEGORY I CREDITS CERTIFIED • NO REGISTRATION FEE REQUIRED

Conferences are held in Lecture Hall "A"
Second Floor—New College Building
Hahnemann University, 15th and Vine Streets, Philadelphia, PA 19102

19 **Deviants, Drugs, and the Red Snapper: Tuberculosis Then and Now**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ and N.J.M.S.)

24 **Clinical Decision Analysis**
12 noon-1 P.M.—Robert Wood Johnson Medical School, Medical Education Building, Rm. 102, New Brunswick
(UMDNJ)

26 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ and N.J.M.S.)

NEUROLOGY/PSYCHIATRY

May

6 **Grand Rounds**
10:30-12:00 P.M.—New Jersey Medical School, Newark
(UMDNJ)

7 **Anorexia Nervosa/Bulimia**
14 **Speechmaking for the Clinician**
21 **Rights and Responsibilities of Treatment Decisions**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

7 **Case Seminars and Supervision**
21 **To Improve Psychotherapeutic Technique**
8-10:00 P.M.—312 Harding Drive, South Orange
(Advanced Psychiatric Study Group and AMNJ)

8 **Lithium Toxicity Indications, Assessment**
10:45 A.M.—Greystone Park Psychiatric Hospital, Greystone Park
(AMNJ)

14 **Psychiatric Lecture Series**
1 P.M.—Essex County Hospital, Rm. 200, Cedar Grove
(Essex County Hospital Center and UMDNJ)

20 **Double Trouble: Challenge of the Dually Diagnosed Chemical Abuser**
All day—Carrier Foundation, Belle Mead.
(Carrier Foundation)

June

2 **Case Seminars and Supervision**
16 **To Improve Psychotherapeutic Techniques**
8-10 P.M.—312 Harding Drive, South Orange
(AMNJ)

3 **Grand Rounds/Psychiatry**
10:30-12 noon—New Jersey Medical School, Newark
(UMDNJ)

4 **Neurology Grand Rounds**
11 3-5 P.M.—Robert Wood Johnson
18 Medical Center, Medical Education Building, Rm. 108A, New Brunswick
(UMDNJ and AMNJ)

4 **Case Seminars and Supervision**
18 **To Improve Psychotherapeutic Technique**
8-10 P.M.—312 Harding Drive, South Orange
(Advanced Psychiatric Study Group and AMNJ)

4 **Neurology Grand Rounds**
11 3-5 P.M.—Robert Wood Johnson
18 Medical School, Medical Education Building, Rm. 108A, New Brunswick
(UMDNJ)

11 **Neurobiological Mechanisms of Major Psychiatric Disorders**
18 **Group Interactions in Treatment of Geriatric Patients**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

18 **PRO—Its Present Impact and Future Implication**
5:30-6:30 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

PATHOLOGY

May

1 **Pathology/Radiology/Orthopedic Conference**
8-9 A.M.—University Hospital, H Level, Conference Rm., Newark
(UMDNJ)

5 **Anatomic Pathology Specialty**
12 **Conference**
19 5:15-6 P.M.—New Jersey Medical
26 School, Rm. C-555, Newark
(UMDNJ)

5 **Pathology—GI Conference**
12 3 P.M.—University Hospital,
19 Rm. E-155, Newark
26 *(UMDNJ)*

6 **Experimental Pathology Seminar**
20 12 P.M.—New Jersey Medical School, Newark
(UMDNJ)

6 **Pathology Grand Rounds**
13 1:30-5:30 P.M.—New Jersey Medical
20 School, Newark
27 *(UMDNJ)*

6 **Pathogenesis of Peptic Ulcer**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

9 **NJ Society Pathologists Annual Meeting**
7:45 A.M.-4:45 P.M.—Somerset Marriott Hotel, Somerset
(AMNJ)

12 **Renal Biopsy Conference**
12:30-2 P.M.—Barnert Memorial Hospital Center, Conference Rm., Paterson
(AMNJ and Barnert Memorial Hospital Center)

13 **Neuropathology Conference**
27 10:30-12:00 noon—New Jersey Medical School, Newark
(UMDNJ)

21 **Renal Pathology Conference**
4 P.M.—University Hospital, Rm. E-155, Newark
(UMDNJ)

June

2 **Anatomic Pathology Specialty**
9 **Conference**
16 5:15-6 P.M.—New Jersey Medical School, Medical Science Building, Rm. C-355, Newark
(UMDNJ)

3 **Experimental Pathology Seminar**
12 noon—N.J. Medical School, Rm. MSB C-555, Newark
(UMDNJ)

3 **Pathology Grand Rounds**
10 1:30-5:30 P.M.—N.J. Medical School,
17 Room C, Newark
24 *(UMDNJ)*

6 **Pathology-GI Conference**
9 3 P.M.—University Hospital,
16 Rm. E-155, Newark
23 *(UMDNJ)*
30

9 **Renal Biopsy Conference**
12:30-2 P.M.—Barnert Memorial Hospital, Conference Rm., Paterson
(Barnert Memorial Hospital)

10 **Neuropathology Conference**
24 10:30-12 noon—New Jersey Medical School, Rm. C-555, Newark
(UMDNJ)

18 **Renal Pathology Conference**
4 P.M.—University Hospital, Room E-155, Newark
(UMDNJ)

PEDIATRICS

May

1 **Advances in Pediatrics**
8 9:30-10:30 A.M.—New Jersey
15 Medical School, Medical Science
22 Building, Rm. B-610, Newark
29 *(UMDNJ)*

1 **Children's Pediatric Surgical**
8 **Conference**
15 8 A.M.—United Hospitals Medical
22 Center, Annex Building, Conference Rm. A, Newark
(Children's Hospital of New Jersey and UMDNJ)

8 **Controversies in Pediatrics**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

June

5 **Children's Pediatric Surgical**
12 **Conference**
19 8 A.M.—United Hospitals Medical
26 Center, Rm. A, Annex Bldg., Newark
(UMDNJ)

5 **Pediatric Distinguished Lecture**
12 **Series**
8 A.M.—Overlook Hospital, Wallace Auditorium, Summit
(AMNJ)

5 **Advances in Pediatrics**
12 9:30-10:30 A.M.—New Jersey
19 Medical School, Medical Science
26 Building, Rm. B-610, Newark
(UMDNJ)

12 **Neurological Implications of Lactic Acidosis**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

RADIOLOGY

May

1 **Pathology/Radiology/Orthopedic**
8 **Conference**
15 8-9 A.M.—University Hospital,
22 Conference Rm., Newark
29 *(UMDNJ)*

13 **Radiology Grand Rounds**
27 2 P.M.—University Hospital, Newark
(UMDNJ)

June 8-12, 1987

Update Your Medicine 1987.

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(212) 650-2309

MOUNT SINAI MEDICAL CENTER

21 **Update on Interventional Radiology**
7:30 P.M.—St. Barnabas Medical Center, Livingston
(AMNJ)

27 **Radiology/Pathology Conference**
11:30 A.M.—Rahway Hospital, Conference Rm. Rahway
(Rahway Hospital and AMNJ)

SURGERY

May

1 **Cancer Research Colloquium**
8 12-1:15 P.M.—Medical Science
15 Building, Rm. G-506B, Newark
22 *(UMDNJ)*
29

2 **Mortality and Morbidity**
9 **Conference**
16 8:30-9:30 A.M.—Medical Science
23 Building, Rm. B-610, Newark
30 *(UMDNJ)*

4 **Surgical Grand**
11 **Rounds/Distinguished Lecture**
18 **Series**
25 4:30-6 P.M.—New Jersey Medical
School, Newark
(UMDNJ)

6 **Surgical Grand Rounds**
7 8:30-10 A.M.—Robert Wood Johnson
13 Medical School, Lecture Hall,
20 Rm. 102, New Brunswick
(UMDNJ)

6 **Trauma Conference**
13 8 A.M.—University Hospital, Newark
20 *(UMDNJ)*
27

29 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive, West Orange
(UMDNJ)

June

1 **Surgical Grand Rounds/**
8 **Distinguished Lecture Series**
15 4:30-6 P.M.—New Jersey Medical
22 School, Newark
29 *(UMDNJ)*

1 **Orthopedic Grand Rounds and**
8 **Lecture Series**
15 6-8 P.M.—New Jersey Medical
22 School, Medical Science Building,
29 Rm. B-556, Newark
(UMDNJ)

2 **Surgery: Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson Medical Center, Lecture Hall 102, New Brunswick
(UMDNJ)

3 **Joint Annual Meeting of the N.J. Gastroenterological Society/N.J. Society for Gastrointestinal Endoscopy**
2-5 P.M.—The Manor, West Orange
(AMNJ)

3 **Surgical Grand Rounds**
8:30-10 A.M.—Robert Wood Johnson Medical School, Rm. 102, New Brunswick
(UMDNJ)

3 **Trauma Conference**
10 8 A.M.—University Hospital, Newark
17 *(UMDNJ)*
24 3 **Surgical Grand Rounds**
10 8:30-10:30 A.M.—Robert Wood
17 Johnson Medical School, Lecture
24 Hall 102, New Brunswick
(UMDNJ)

4 **Vascular Surgery Conference**
11 **Rounds**
18 4 P.M.—Robert Wood Johnson
25 Medical School, Medical Education
Building, New Brunswick
(AMNJ)

5 **Cancer Research Colloquium**
12 noon-1:15 P.M.—NJMS, Medical Science Building, Rm. G-506B, Newark
(Newark)

13 **7th Annual Advances in Gastroenterology**
7:30 A.M.-4 P.M.—Bally's Park Place Casino Hotel, Atlantic City
(AMNJ)

16 **Urology/IVP Conference**
4-6 P.M.—New Jersey Medical School, Rm. 600, Newark
(UMDNJ)

25 **Distinguished Lecture Series—Neurosurgery**
4-5:30 P.M.—University Hospital, Rm. E-343, Newark
(UMDNJ)

26 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive, West Orange
(UMDNJ)

SURGICAL SPECIALTIES

May

4 **Orthopaedic Grand Rounds and**
11 **Lecture Series**
18 6-8 P.M.—New Jersey Medical
25 School, Medical Science Building,
Rm. B-556, Newark
(UMDNJ)

7 **Vascular Surgery Conference**
14 **Rounds**
21 4-5 P.M.—Robert Wood Johnson
28 Medical School, Medical Education
Building, New Brunswick
(UMDNJ)

20 **Grand Rounds in Ophthalmology**
7-9 P.M.—Eye Institute of NJ, Newark
(UMDNJ, Eye Res. Prog.)

26 **Advances in Eye Surgery**
8-10 P.M.—The Englewood Club, Englewood
(The Englewood Surgical Society and AMNJ)

28 **Distinguished Lecturer Series—Neurosurgery**
4-5:30 P.M.—University Hospital, Rm. E-343, Newark
(UMDNJ)

June

4 **Vascular Surgery Conference**
11 **Rounds**
18 4-5 P.M.—Robert Wood Johnson
25 Medical School, Medical Education
Building, New Brunswick
(UMDNJ)

17 **Ophthalmology/Grand Rounds**
7-9 P.M.—Eye Institute of New Jersey, Annex Auditorium, Rooms B and C, Newark
(UMDNJ)

MISCELLANEOUS

May

1 **Medical Aspects of Nuclear War**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

13 **Office Management of Common Medical Issues**
12-4 P.M.—Kennedy Memorial Hospital, Stratford
(UMDNJ)

June

23 **Beyond Despair: Empowerment in**
24 **a Nuclear Age**
8:30 A.M.-4:30 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

PEDIATRIC PRACTICE IN THE 1990s:

PROSPECTS FOR PROSPERITY

A Survival Kit For The Coming Revolution In Practice Management

TUESDAY, APRIL 21, 1987
8 a.m. to 1 p.m.
at
Newark Beth Israel Medical Center
201 Lyons Avenue
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Guest Speakers Include:

Lawrence M. Gartner, M.D.
Professor & Chairman, Department of Pediatrics
University of Chicago, Pritzker School of Medicine

Larry D. Eggert, M.D.
Assistant Professor of Pediatrics
Medical Director, Neonatal Transport
University of Nebraska Medical Center

Kevin Tylus
Manager, Health Care Services
Touche Ross
Newark, N.J.

Steven A. Freedman, Ph.D.
Assistant Professor of Pediatrics, College of Medicine
Director, Institute For Child Health Policy
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Registration Deadline: April 14, 1987
Physician Fee: $40 (lunch included)
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CALL for PAPERS and POSTERS

AGING

A MULTIDISCIPLINARY PERSPECTIVE

October 16-18, 1987 at the Hyatt Hotel
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BOOK REVIEWS

Atlas of Clinical Rheumatology; Clinician's View of Neuromuscular Diseases; Drug Therapy in Infants and Children with Cardiovascular Diseases

Atlas of Clinical Rheumatology

Dieppe, Bacon, Bamji, and Watt. Philadelphia, PA, Lea & Febiger, 1986. Pp. 388. Illustrated. ($75)

This book is a marvelous aid in understanding the various rheumatic diseases via pictorial-textual design. The clinical photographs are perfect, each displaying clearly the pathology depicted. The radiographs are consistently excellent; but just in case the reader misses the point, each is accompanied by an instructive caption plus an excellent diagram. The same is true of the histology slides. This reviewer gained much insight into conditions such as alanto-axial joint subluxation and spondylolisthesis, differentiating the syndesmophytes of inflammatory spondylitis from the osteophytes of mechanical degenerative spine disease. The text is incomplete with occasional glaring errors as in the chapter on polymyositis in which it is stated that 90 percent of patients with this disease have associated malignancy. (The usual percentage quoted is about 10 percent.) Without a bibliography, misstatements as this are even more glaring. Although recently published, the *Atlas* suffers from "jet lag" produced by rapid expanding technologies. For example, the excellent chapter on the spine depicts no magnetic resonance imaging which is extremely valuable in evaluating disc disease, particularly septic discitis.

I believe everyone with an interest in musculoskeletal diseases should have this *Atlas* available. It is helpful to use as a reference for rare musculoskeletal disease and extremely valuable to help one understand the pathophysiology of musculoskeletal processes.

Sheldon D. Solomon, M.D.

A Clinician's View of Neuromuscular Diseases, Second Edition

Michael H. Brooke, M.D. Baltimore, MD, Williams & Wilkins, 1986. Pp. 388. Illustrated. ($44.50)

This is an excellent, comprehensive, and authoritative text on neuromuscular diseases. It is a very well done work.

Dr. Brooke has chosen the right title for his text. The book will be of great use for clinicians and is suitable for daily reference by practicing physicians. It also will serve as a very complete text for study of the entire subject. The author obviously has drawn from a large patient population and clinical experience in assembling this text.

The host of neuromuscular diseases are considered by usual categories, such as diseases of the motor neurons, diseases of the neuromuscular junction, muscular dystrophies, and inflammatory myopathies. History, clinical picture, pathology, differential diagnosis, laboratory findings, treatment, and prognosis are considered in detail.

The text is quite readable and lucid. References are placed at the end of each topic for the disease entities discussed (a very useful arrangement) and are quite numerous in every case. The book is illustrated profusely with photographs of patients and microscopic findings in muscle for many diseases.

The initial section on signs and symptoms especially will be useful for those not trained specifically in muscle disease. A section on muscle metabolism and exercise physiology is quite detailed and very well done. The chapter about metabolic diseases of muscle especially is complete. Although this is not a large text, each disease and topic is considered in more than adequate depth and detail.

This should be a very useful and popular text for pediatricians, family practitioners, and internists, as well as physiatrists, rheumatologists, and neurologists. This book is highly recommended and should prove a most worthwhile investment for its readers.

Stanley C. Leonberg, Jr., M.D.

Drug Therapy in Infants and Children with Cardiovascular Diseases

Adam Schneeweiss, M.D. Philadelphia, PA, Lea & Febiger, 1986. Pp. 398. ($45)

This book provides pediatric cardiologists with a comprehensive account of drug therapy for patients with cardiovascular diseases. However, this is a rapidly changing field and drug modalities often change in brief periods of time. Although the author made a considerable effort in providing an extensive bibliography, by the time of publication most of the latest references already were two to three years old. Another important shortcoming in writing a book of this kind is that most of the experience with the "new drugs" comes from the adult literature and the outcome may not be fully applicable to children in various stages of growth and development. Nevertheless, this book presents a well-organized survey of progress and knowledge of cardiovascular drug therapy. Chapters are well organized and each drug is presented in a systematic way. Step-by-step information is provided regarding the basic structure, pharmacologic properties, hemodynamic effects, clinical pharmacology, side effects, drug interaction, dosage, and administration. Some repetition of information is inevitable mainly when describing drugs belonging to the same class. The ten-page index particularly is helpful.

Jose Marin, M.D.

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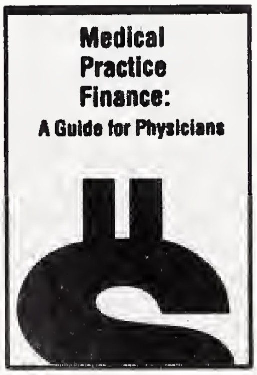

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OBITUARIES

Drs. Adler; Child; Gould; Horowitz; Lepore; Lippman; Oxenstein; Reich; Stoner; Travagline; Woltmann

Dr. Lydia Adler (Dorsen)

Lydia Adler, M.D., a family practitioner in New Brunswick prior to her retirement, died on December 19, 1986. Born in Budapest, Hungary, in 1913, Dr. Adler received her medical degree at the German University, Prague, Czechoslovakia. She was graduated in 1937, and shortly afterward emigrated to the United States. Dr. Adler became a member of our Middlesex County component and of the American Medical Association. She had been affiliated with Middlesex General Hospital and St. Peter's Medical Center, both in New Brunswick. Dr. Adler's most recent address had been Fort Lauderdale, Florida.

Dr. George P. Child

George Percy Child, M.D., a Roselle Park family practitioner for over 30 years, died on November 14, 1986, at the age of 78. Born in New York, Dr. Child was graduated from Albany Medical College, New York, in 1950. He was a member of our Union County component and of the American Medical Association. Dr. Child had been affiliated with St. Elizabeth Hospital and Elizabeth General Medical Center, both in Elizabeth. He had served with the United States Public Health Service from 1950 to 1952 as a surgeon.

Dr. Werner Gould

A dermatologist in Hackensack prior to his retirement in 1978, Werner Gould, M.D., died on December 13, 1986, at the venerable age of 88. Born in Leipzig, Germany, Dr. Gould received his medical degree from the University of Leipzig in 1925. He was a member of our Bergen County component and of the American Medical Association. Dr. Gould had been affiliated with Hackensack Medical Center and South Bergen Hospital, Hasbrouck Heights. During World War II, he served in the medical corps of the Army of the United States, attaining the rank of captain. In 1975, Dr. Gould received MSNJ's Golden Merit Award.

Dr. Robert Horowitz

A gastroenterologist in Jersey City, Robert Horowitz, M.D., died on November 26, 1986, at the age of 74. Born in Jersey City, Dr. Horowitz was graduated from the University of Western Ontario Faculty of Medicine, London, Ontario, Canada, in 1939. He was a member of our Hudson County component and of the American Medical Association. Dr. Horowitz was a Fellow of the American College of Gastroenterology, and had been affiliated with Christ Hospital, the Jewish Hospital, and the Medical Center, all in Jersey City. He had served in the medical corps of the Army of the United States during World War II, emerging with the rank of major.

Dr. John M. Lepore

John Michele Lepore, M.D., a family practitioner in Newark and Belleville for nearly 40 years, died on December 4, 1986, at Clara Maass Memorial Hospital, Belleville. Born in 1915, in Newark, Dr. Lepore was graduated from Hahnemann Medical College, Philadelphia, in 1943. He had been a member of our Essex County component and had been affiliated with Clara Maass Medical Center. During World War II, Dr. Lepore served in the medical corps of the Army of the United States, as a captain in the 94th Armored Division in Germany.

Dr. Nathan L. Lippman

An Atlantic City and Ventnor family physician for over 30 years, Nathan Louis Lippman, M.D., died on October 3, 1986. A native of Atlantic City, born in 1914, Dr. Lippman received his medical degree from Jefferson Medical College, Philadelphia, in 1939. He was a member of our Atlantic County component and of the American Medical Association. Dr. Lippman had been affiliated with the Atlantic City Medical Center. During World War II, he served in the medical department of the United States Air Force, attaining the rank of lieutenant colonel.

Dr. Abraham Oxenstein

A general surgeon with offices in Newton, Abraham Oxenstein, M.D., died on December 3, 1986, at the untimely age of 58. Born in Lima, Peru, Dr. Oxenstein was graduated from San Fernando Medical School in Lima in 1956. He emigrated to the United States immediately after graduation, and spent some time in Cambridge, Massachusetts, before establishing an office in Newton. He became a member of our Sussex County component, and had been affiliated with Wallkill Valley General Hospital, Franklin, and Newton Memorial Hospital.

Dr. Martin L. Reich

At the untimely age of 47, Martin Leslie Reich, M.D., a Morris Plains internist and rheumatologist, died on January 5, 1987, at Morristown Memorial Hospital. A native of Jersey City, Dr. Reich was graduated from Seton Hall College of Medicine (now UMDNJ-New Jersey Medical School) in 1964. He was a member of our Morris County component, and was board certified in his specialties. Dr. Reich had been affiliated with Morristown Memorial Hospital, and had served as rheumatology subsection chairman from 1973 to 1983. He also had been secretary and vice-chairman of their department of medicine. Dr. Reich had been an instructor in clinical medicine at Columbia University, New York, and was a consultant in rheumatology at St. Francis Hospital, Port Jervis, New York.

Dr. Emery K. Stoner

Emery Kaufman Stoner, M.D., retired chief of the physical medicine and rehabilitation department at

The Hospital of the University of Pennsylvania (HUP), Philadelphia, died on November 14, 1986, of a heart attack. Dr. Stoner was only 66 years of age. Born in Bedford Valley, Pennsylvania, he was graduated from the University of Pennsylvania's School of Medicine in 1945. Dr. Stoner was a member of our Camden County component, and was board certified in his specialty. He was clinical professor of physical medicine and rehabilitation at the University of Pennsylvania's School of Medicine. Dr. Stoner founded the Regional Rehabilitation Center of Southern New Jersey at Our Lady of Lourdes Medical Center, Camden, and founded a similar department at his alma mater. During World War II, Dr. Stoner served in the medical corps of the United States Army. Dr. Stoner was a recipient of the Chapel of the Four Chaplains Award from Temple University, Philadelphia, and was nominated for the Robert Dunning Dripps Memorial Award from HUP the day before his death.

Dr. Dominic J. Travagline

At only 54 years of age, Dominic Joseph Travagline, M.D., an orthopedic surgeon in Atlantic City, died on September 13, 1986, in Underwood Memorial Hospital, Woodbury. Born in Paulsboro, Dr. Travagline was graduated from Seton Hall College of Medicine and Dentistry, Jersey City, in 1962. He was a member of our Atlantic County component and of the American Medical Association. Dr. Travagline was a Fellow of the American Academy of Orthopedic Surgeons. He had been affiliated with Hahnemann Medical Center, and with the Medical Center, Atlantic City, and Shore Memoria Hospital, Somers Point.

Dr. Charles E. Woltmann

Charles Edward Woltmann, M.D. a practitioner of family medicine in Hoboken for over 30 years, died a his home in Lakehurst on December 25, 1986. Dr. Woltmann had retired from active practice in 1979. Born in Jersey City, in 1913, Dr. Woltmann was graduated from Georgetown University School of Medicine Washington, D.C., in 1939. He had been a member of our Hudson County component, and had been affiliated with Christ Hospital and St. Francis Health Center, both in Jersey City. During World War II, Dr Woltmann served with the medica corps of the Army of the United States, and achieved the rank of captain.

AUTHOR INFORMATION

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CONTENT

The educational content of each issue appears as scientific articles, based on research, original concepts relative to epidemiology of disease, and treatment methodology; case reports based on unusual clinical experiences; review articles; clinical notes, succinct items on some aspect or new observation or technique of a case experience; and special articles, which include evaluations, policy and position papers, and reviews of nonscientific subjects. Other topics include commentary (critical narration); medical history; therapeutic drug information; pediatric briefs; nutrition update; and an opinion column. Editorials are prepared by the Editor and by guest contributors on timely and relevant subjects; editorials are the responsibility of the author. The Doctors' Notebook section contains organizational, informational, and administrative items from MSNJ and from the community. Letters to the Editor and book reviews are welcome and will be published as space permits. The principal aim in the preparation of a contribution should be relevance to diagnosis and treatment and to education of patients and professionals. Preference will be given to professional authors from New Jersey and to out-of-state lecturers who submit a suitable manuscript based on a presentation made in New Jersey.

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1. Goldwyn RM: Subcutaneous mastectomy. *J Med Soc NJ* 74:1050-1052, 1977.
2. Dixon WJ, Massey FJ: *Introduction to Statistical Analysis.* New York, NY, McGraw-Hill, 1969, pp. 42-48.

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Receipt of each manuscript will be acknowledged and a copy delivered to the Editor who refers the paper to one or more members of the Editorial Board. The final decision is reserved for the Editor. No direct contact between the reviewers and the authors will be permitted, but authors will be informed of the reviewers' comments. The publication lag for original articles may be six months or more. Galley proofs will be submitted to the author for correction of typographical errors.

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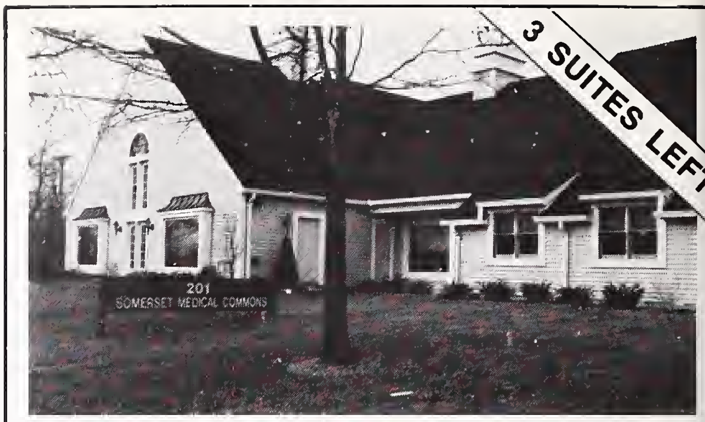

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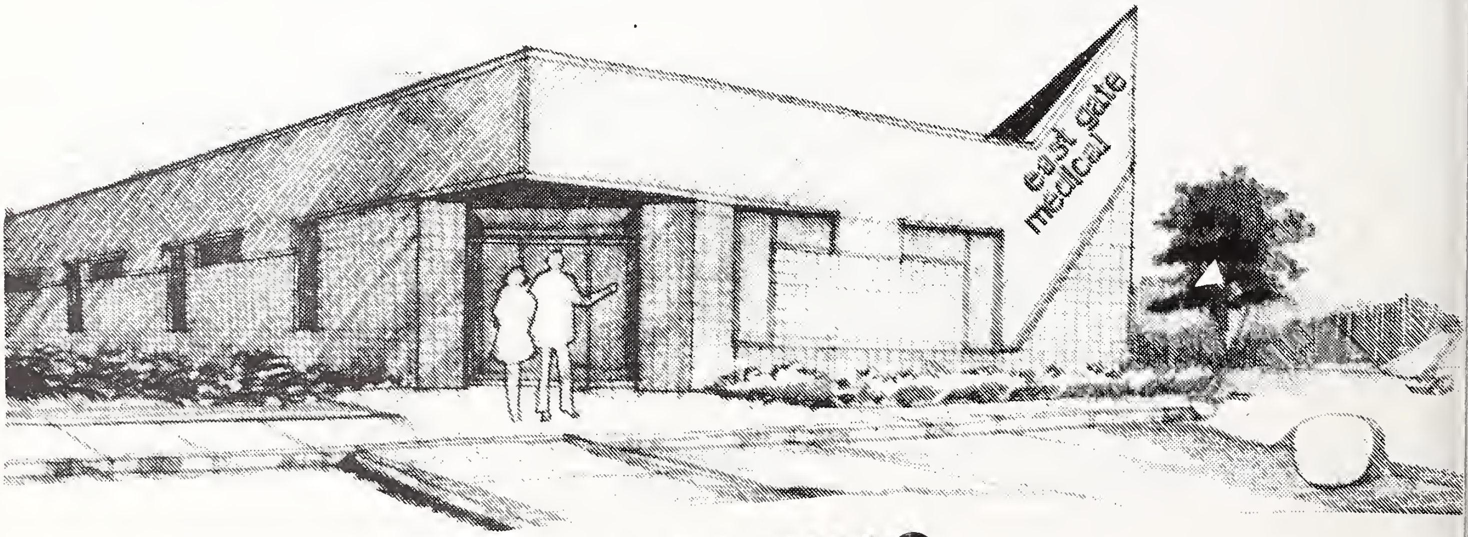

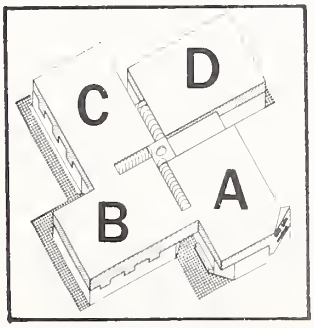

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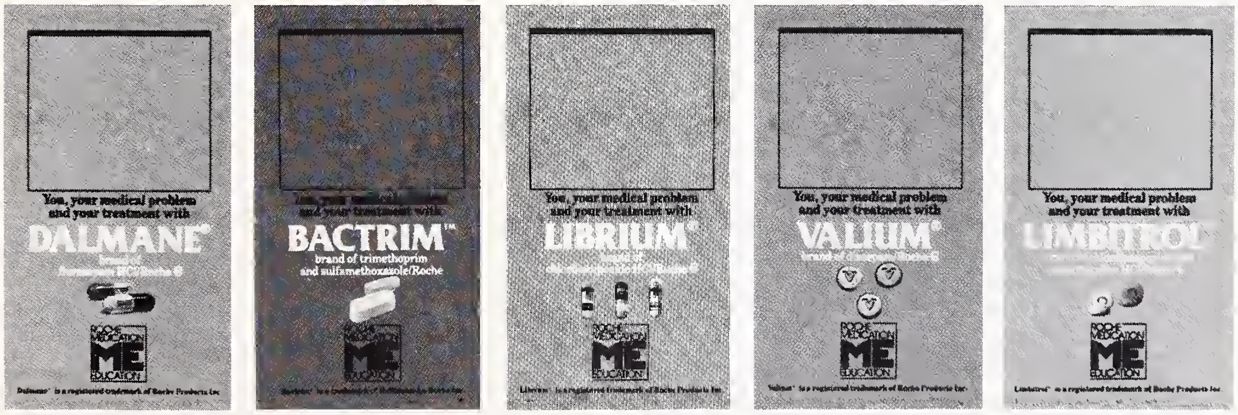
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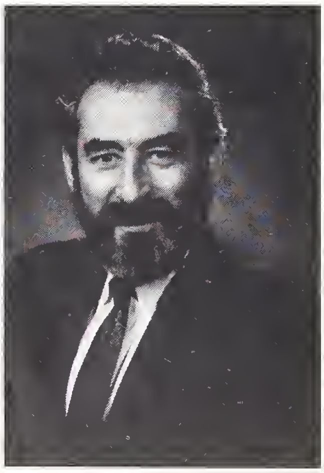
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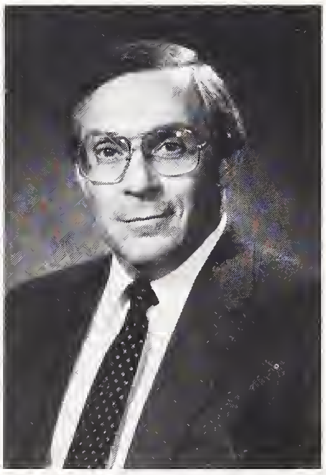
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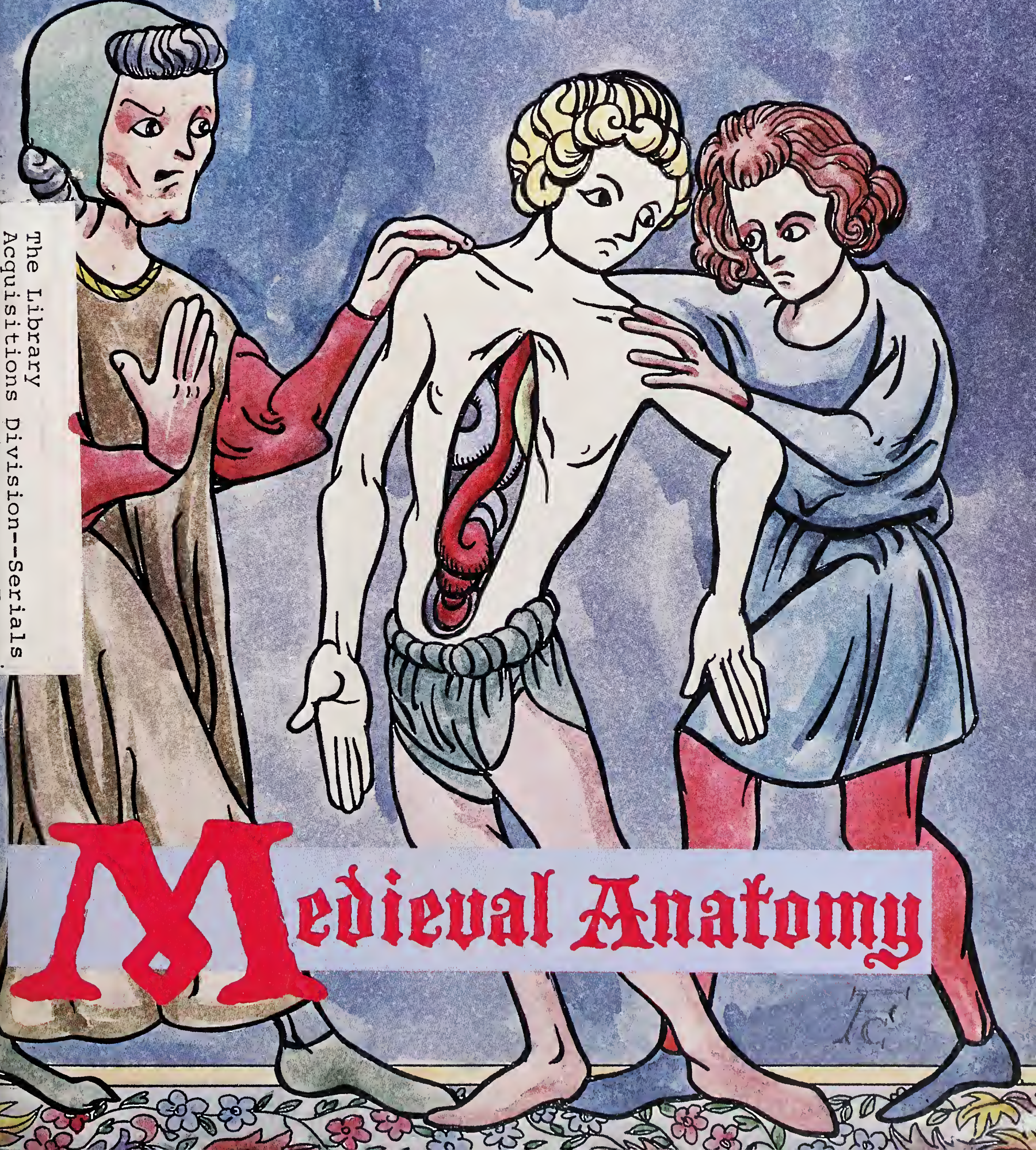

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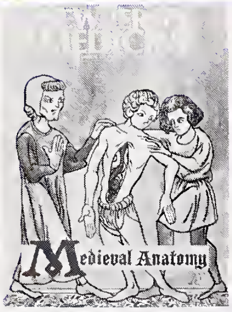

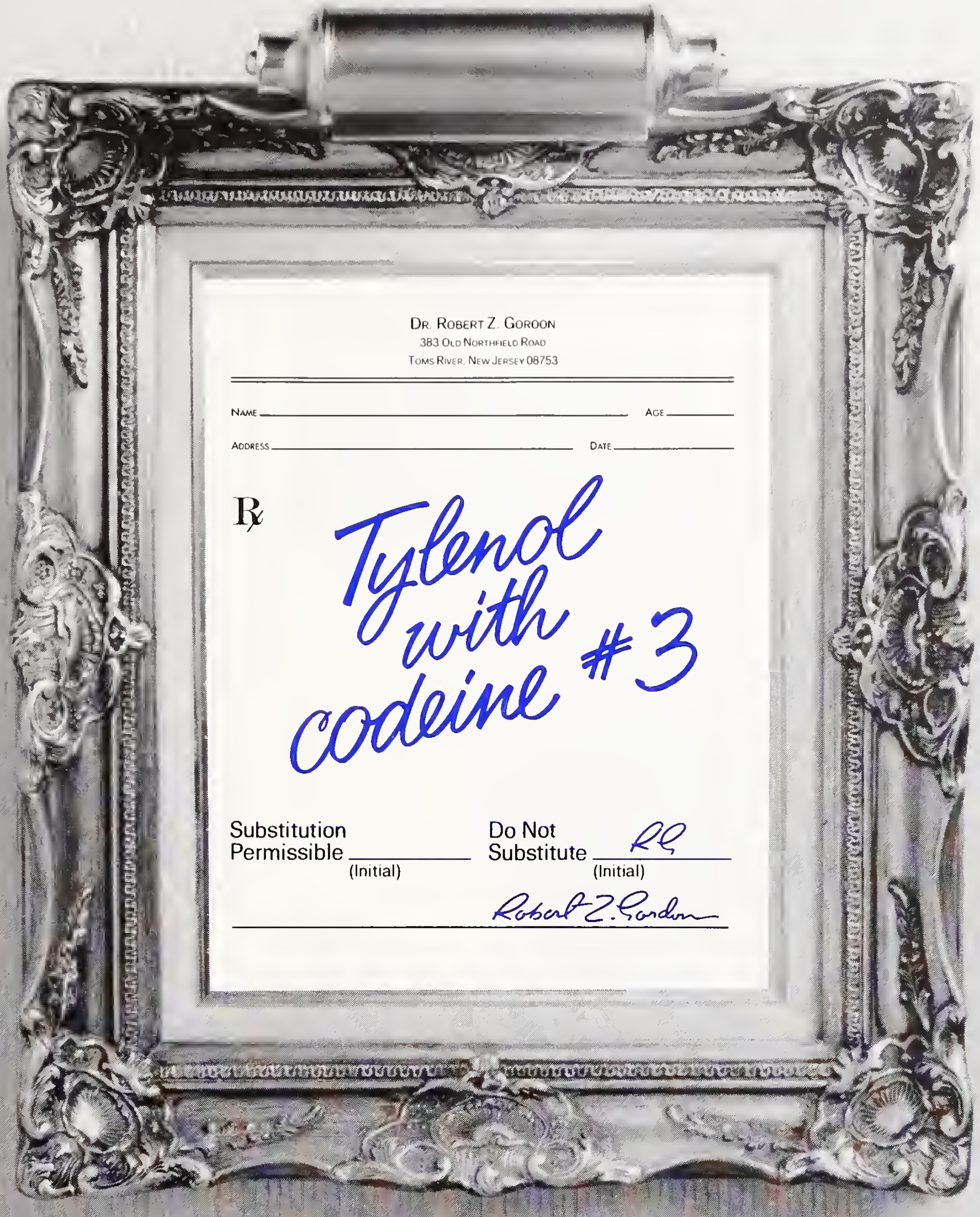

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AMA ISSUES IN THE 100TH CONGRESS

AMA's leadership has identified six top priorities for the Washington office and federation effort: physician reimbursement (including physician DRGs, Medicare fee controls, and mandated assignment), tobacco issues, campaign finance reform, professional liability, support for biomedical research, and unrelated business income tax. For the first time, the AMA has hired an outside lobby firm to augment AMA, state, and specialty efforts. The AMA will be working on other issues as well: catastrophic health insurance, professional self-regulation, AIDS, PRO issues, and Medicare reform.

AMA MEMBERSHIP AWARD

Once again, the Medical Society of New Jersey will receive the 1986 AMA Membership Award for outstanding membership recruitment. As promised, MSNJ will receive an award plaque with thanks from the AMA for all staff efforts.

STATE OF NEW JERSEY PROCLAMATION: DOCTORS' DAY

Whereas, the Medical Society of New Jersey, which was founded in 1766, has received widespread recognition and highest honors for its tireless and dedicated efforts on behalf of numerous medical, community, and philanthropic projects; and

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Increasing concern has been expressed both nationally and in New Jersey about issues of quality of physician education and licensure. Questions about whether physicians are being adequately prepared for independent practice in the modern U.S. health care environment have been raised in many quarters. In particular, since 1980, New Jersey has been faced with growing numbers of physician licensure applicants with significant deficiencies in their educational preparation.

Recognizing that New Jersey's decades-old physician licensure requirements have fallen behind contemporary medical education and practice standards, the Board of Higher Education and the Board of Medical Examiners established, in the fall of 1985, a joint committee to review the legislation and regulations that establish standards for the education and licensure of physicians in New Jersey. It recommends statutory and regulatory changes to upgrade the state's requirements for physician licensure. The recommendations are consonant with the long-standing commitment of the Medical Society of New Jersey to encourage the highest standards of education and practice among New Jersey physicians.

The proposed changes in licensing standards were approved by the Department of Higher Education. Copies of the reports are available from the State of New Jersey, Department of Higher Education, CN-542, Trenton, NJ 08625.

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LEGISLATIVE UPDATE

Status of Legislation on Which MSNJ Has Taken an Active Position

Bill	Subject	MSNJ Position	Committee	Present Status
S-100 Bubba	Requires physicians to personally present and obtain surgical consent forms and signatures. The form shall state the name of any assisting physician that performs surgery under the supervision of the attending.	Active Opposition	Senate: LIP	In committee
S-124 Bubba	Requires express written consent to surgery except in cases of physical or mental incapacity or emergencies. The State Board, after consultation with the Health Department, the Medical Society, and the Hospital Association shall prescribe the consent forms which shall be used by physicians.	Active Support	Senate: LIP	Passed in Senate; in Assembly committee (HHR)
S-179 Brown	Requires the Department of Health to prepare a booklet on breast cancer which must be given to breast cancer patients by their physicians.	Active Opposition	Senate: IHW	Out of committee; 2nd reading
S-281 Dumont	Provides for a three-year statute of limitations, except for fraud, intentional concealment, or nontherapeutic or diagnostic purpose. Minors have until age 11 on any injury prior to age 8.	Active Support	Senate: JUD	In committee
S-345 Ewing	Creates a commission to advise the governor and the legislature regarding any proposals to regulate or license new professions.	Active Support	Senate: LIP	Out of committee; 2nd reading
S-403 Rand	Grants immunity to peer review organizations when the organization is recognized by the Dept. of Health. Provides for confidentiality of materials and records of the PRO.	Active Opposition	Senate: IHW	In committee
S-440 Garibaldi	Provides that cancers caused by exposure to heat, cold, radiation, or a known carcinogen which manifest themselves in active police and firemen are assumed to be accidental and work-related disabilities.	Active Opposition	Senate: SGF&IR&VA	In committee
S-492 Garibaldi	Requires a second physician to be present at any termination of pregnancy procedure, if the attending has determined the unborn fetus is 24 weeks of age or older. The second physician is to provide immediate care to the child if it is born alive.	Active Opposition	Senate: IHW	In committee

Assembly Reference Committees
HHR: Health and Human Resources
HERP: Higher Education and Regulated Professions
JUD: Judiciary
SG: State Government
INS: Insurance
SC: Senior Citizens
EDA: Economic Development and Agriculture

Senate Reference Committees
LIP: Labor, Industry, and Professions
SGF&IR&VA: State Government, Federal & Interstate Relations & Veterans Affairs
IHW: Institutions, Health & Welfare
JUD: Judiciary
RFA: Revenue, Finance & Appropriations
CH: Children Services

Bill	Subject	MSNJ Position	Committee	Present Status
S-493 Garibaldi	Requires the State Board of Medical Examiners to conduct a study as to when fetal viability occurs so that the conduct of physicians may be governed accordingly. After the study, the Board is to promulgate guidelines regarding the termination of pregnancy.	Active Opposition	Senate: IHW	In committee
S-539 Cardinale	Exempts the private practice of medicine from the certificate of need law.	Active Support	Senate: IHW	In committee
S-600 Bassano	Requires every physician attending a woman at the time of delivery, miscarriage, abortion, or during the prenatal period to perform an Rh test. If the test is Rh negative the physician shall within 24 hours of the results, advise the woman of its significance and availability of treatment.	Active Opposition		Passed in Senate and Assembly
S-935 Feldman	Provides that within 60 days of filing an action against a physician the plaintiff must provide an affidavit from an expert that there has been a negligent deviation from the accepted standards of practice.	Active Support	Senate: JUD	In committee
S-962 Feldman	Makes the decision of an Administrative Law Judge final in contested agency actions.	Active Support	Senate: JUD	In committee
S-1197 Jackman	Creates a separate licensing and regulatory board for chiropractic.	Active Opposition	Senate: LIP	In committee
S-1221 Codey	Removes the requirement that the State Commissioner of Health shall be a duly licensed physician.	Active Opposition	Senate: IHW	In committee
S-1241 Codey	Amends the certificate of need to include physicians whenever a health service has been regionalized by regulation of the Department of Health. Regulation would terminate within three years, at which time, the Commissioner could readopt the regulation.	Active Opposition	Senate: IHW	In committee
S-1283 Hirkala	Extends confidentiality to data in the possession of hospital peer review committee.	Active Support	Senate: IHW	In committee
S-1309 Contillo	Provides for a nonbinding referendum concerning the enactment of a national health plan.	Active Opposition	Senate: IHW	In committee
S-1583 Lesniak	Provides that physicians shall not be exempted from malpractice claims by fellow employees.	Active Opposition	Senate: LIP	In committee
S-1801 Dorsey	Requires food processors and public eating places to provide written notice regarding irradiated foods.	Active Opposition	Senate: IHW	In committee
S-1841 Dalton	Provides that collateral sources of payment shall be used to offset damages. Further provides that periodic payments may be used at the request of either party if the future damages exceed $100,000.	Active Support	Senate: JUD	In committee

Bill	Subject	MSNJ Position	Committee	Present Status
S-1878 Cardinale	Limits noneconomic damage awards to $100,000.	Active Support	Senate: JUD	In committee
S-1979 McManimon	Eliminates the requirement that prescriber's address and registry number be included on the prescription label.	Active Support	Senate: IHW	Signed into law as c.75 P.L. 1986
S-2041 McManimon	Establishes local area health planning agencies to continue the program being terminated by federal government. Funds will be provided by the state with an offset for any federal money that may be received.	Active Opposition	Senate: IHW	In committee
S-2102 McNamara	Establishes a demonstration project to allow hospitals to designate surplus acute beds as swing beds for skilled nursing care.	Active Support	Senate: IHW	In committee
S-2129 Russo	Prohibits physicians from employing physical therapists, owning a physical therapy practice, or any interest in a physical therapy practice.	Active Opposition	Senate: IHW	In committee
S-2187 Brown	Allows a licensed professional registered nurse to serve as the New Jersey Commissioner of Health.	Active Opposition	Senate: IHW	In committee
S-2261 Lynch	Permits optometrists to use drugs for treatment and diagnostic purposes.	Active Opposition	Senate: IHW	Out of committee; 2nd reading
S-2290 Bassano	Makes AIDS a reportable disease. Grants immunity to physicians who deem it advisable to inform sexual partners of patient's condition.	Active Support	Senate: JUD	In committee
S-2385 Cardinale	Places a $350,000 cap on awards for pain and suffering. The limit shall be revised annually by the Consumer Price Index—U.S.-City Average.	Active Support	Senate: JUD	In committee
S-2398 Bassano	Eliminates joint and several liability.	Active Support	Senate: JUD	In committee
S-2403 Bassano	Provides that benefits from collateral sources shall be deducted from awards in personal injury actions.	Active Support	Senate: JUD	In committee
S-2473 Orechio	Requires health care licensees to accept Medicare determination of their fees.	Active Opposition	Senate: IHW	In committee
S-2585 Garibaldi	Requires health care licensees to accept Medicare determinations of their fees.	Active Opposition	Senate: IHW	In committee
S-2644 Lesniak	Limits noneconomic loss in tort cases to $500,000 unless the injury includes significant and severe permanent disability inclding permanent disfigurement.	Active Opposition	Senate: JUD	In committee
S-2703 Lesniak	Modifies the application of joint and several liability in tort actions.	Active Opposition	Senate: JUD	In committee
S-2706 Lesniak	Provides for structured payments. Payments exceed $200,000.	Active Support	Senate: JUD	In committee
S-2707 Russo	Limits noneconomic loss in tort cases to $500,000 unless	Active Opposition	Senate: JUD	In committee

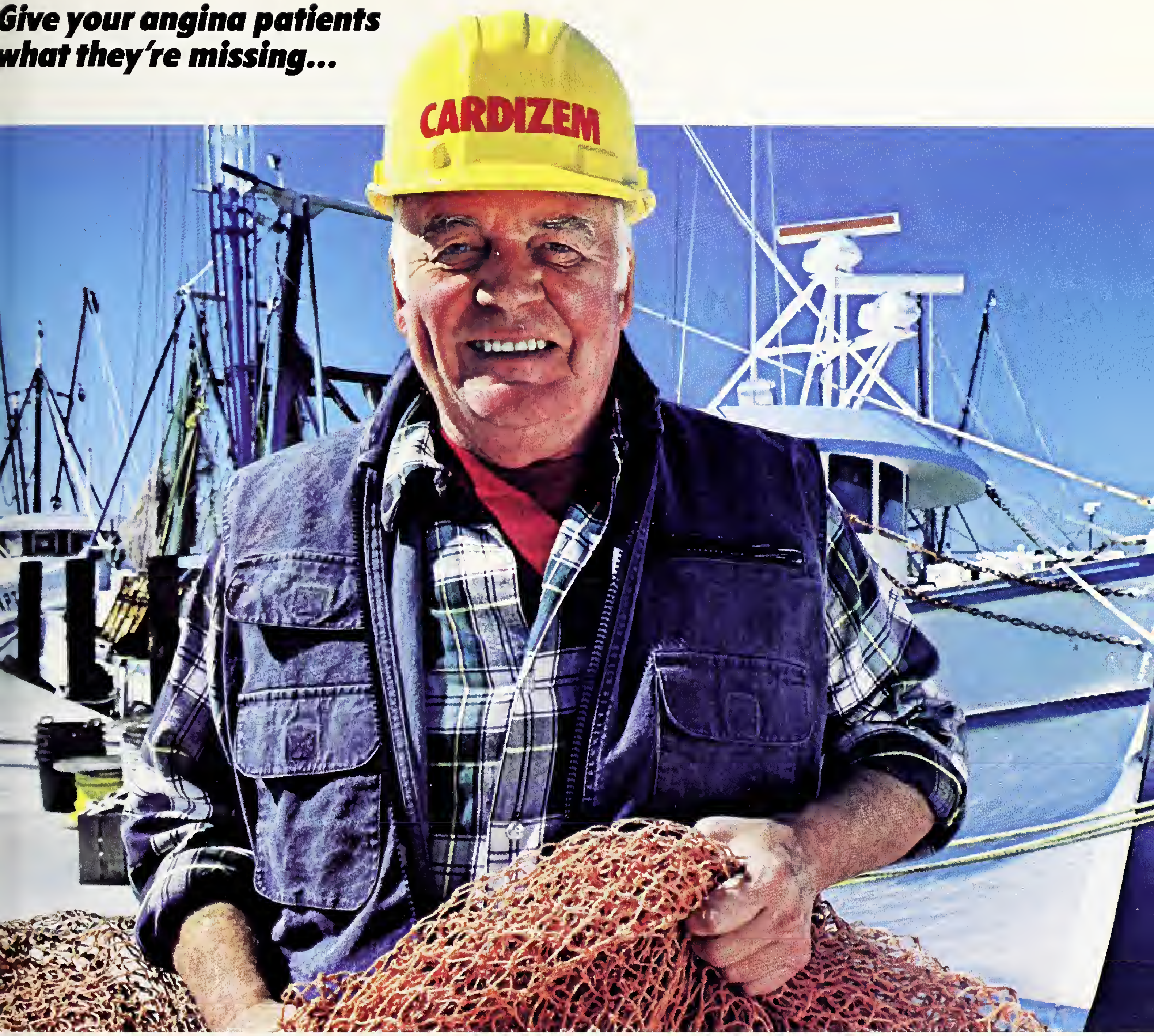
Bill	Subject	MSNJ Position	Committee	Present Status
	the injury includes significant and severe permanent disability including permanent disfigurement.			
S-2721 Lipman	Authorizes nurses to practice medicine and to prescribe drugs and devices.	Active Opposition	Senate: LIP	In committee
SR-5 Bubba	Requests Congress to reject any proposals to tax health benefit packages.	Active Support	Senate: SG&IR&VA	In committee
SR-59 Pallone	Condemns HCFA for deliberate delays in processing Medicare claims.	Active Support	Senate: IHW	In committee
SJR-42 McManimon	Establishes a commission to study the possibility of using health enterprise zones in New Jersey to counteract adverse market conditions.	Active Support	Senate: IHW	Out of committee; 2nd reading
A-137 Muhler	Creates a 27-person Board within the Department of Human Services vested with the authority to release or continue the commitment of persons who were found incapable of standing trial or not guilty by reasons of insanity. A Superior Court judge currently makes these decisions.	Active Opposition	Assembly: HHR	In committee
A-181 Villane	This bill would establish and license two categories of social workers and would create a Board of Social Work Examiners in the Department of Law and Public Safety whose powers and duties, among others, would be to administer the act, examine and license candidates for the various categories of social work, and promulgate rules and regulations necessary for the effective enforcement of the act. The two categories of licensed social work would be 1) social work specialists, who would be required to have a doctorate in social work or a master's degree from an accredited school of social work and 2) social workers who would need a baccalaureate degree from an accredited college or university social work or social welfare program. The bill would "grandfather" in all persons in practice, provided they have been in practice in one of the two licensed categories for two of the last five years and apply to be licensed within 180 days from the effective date of act.	Active Opposition	Assembly: HERP	In committee
A-200 Kosco	Creates a Commission to study the certificate of need process. The Commission would consist of 15 members. Two of the 15 would be physicians. Their report is to be submitted to the legislature and the governor.	Active Support	Assembly: HHR	Passed in Assembly; in Senate committee (JUD); 2nd reading

Bill	Subject	MSNJ Position	Committee	Present Status
A-360 Garvin	Requires the Department of Health and the State Board of Medical Examiners to prepare a booklet on all aspects of the treatment of breast cancer. Attending physicians are required to distribute the book to appropriate patients and to discuss it with them.	Active Opposition	Assembly: HHR	In committee
A-478 Muziani	Directs the State Board of Medical Examiners to review the issue of when fetal viability occurs and to provide guidelines to physicians regarding procedures to terminate pregnancy.	Active Opposition	Assembly: HHR	In committee
A-479 Muziani	Requires a second physician to be present whenever a physician terminates a pregnancy involving a live fetus of 24 weeks of age or older.	Active Opposition	Assembly: HHR	In committee
A-482 Muziani	Requires a physician to advise pregnant patients of the effects of alcohol and certain drugs on a fetus. The woman shall sign a form confirming the advice was given. The physician is to retain the original and provide the patient with a copy.	Active Opposition	Assembly: HHR	In committee
A-716 Miller	Allows patients or insurers to appeal excessive charges under the DRG program.	Active Support	Assembly: HHR	In committee
A-718 Miller	Terminates the DRG program and requires the Department of Health to develop an alternate system within one year.	Active Support	Assembly: HHR	In committee
A-737 Miller	Provides that collateral sources of payment shall be used to offset damages. Further provides structured payments may be used at the request of either party if the future damages exceed $100,000.	Active Support	Assembly: JUD	In committee
A-738 Miller	Provides a $100,000 cap on damages for pain and suffering to personal injury actions.	Active Support	Assembly: JUD	In committee
A-739 Miller	Establishes a 3-year statute of limitations in tort actions against health care providers. Children would have until 11 to bring an action for injuries prior to age 8. After age 8 they come under the 3-year standard. Fraud, concealment, and unintentional foreign bodies "toll" the statute.	Active Support	Assembly: INS	In committee
A-740 Miller	Provides that within 60 days of filing a medical malpractice complaint, the plaintiff must supply an affidavit, by a qualified expert, that reasonable cause exists to believe malpractice occurred.	Active Support	Assembly: INS	In committee
A-776 Weidel	Provides that terminally ill patients may direct their physicians, through a written document to withhold or withdraw mechanical or artificial means to sustain or supplant vital function when	Active Opposition	Assembly: JUD	Out of committee; 2nd reading

Bill	Subject	MSNJ Position	Committee	Present Status
	those acts will only artificially prolong death. The directive shall comply with statutory form. The physician relying upon it shall determine it complies with the statute.			
A-947 Schuber	Transfers the Office of Administrative Law from the Executive Branch to the Judicial Branch. The initial decision made by the agency directly or by report from an administrative law judge. All appeals would then be heard by another administrative law judge. The next appeal would be to the Appellate Division.	Active Support	Assembly: JUD	In committee
A-998 Doria	Creates a commision to review licensing legislation being proposed by any legislator. The commission is to file a report with the governor and the legislature on the necessity of establishing the licensing mechanism being reviewed.	Active Support	Assembly: HERP	Passed in Assembly; in Senate RFA committee
A-1008 Doria	Creates a licensing board for chiropractic. Transfers all functions of the SBME regarding chiropractic to the new board. Removes the place for a chiropractor from the SBME.	Active Opposition	Assembly: HERP	In committee
A-1422 Mazur	Proposes a nonbinding referendum on whether national health insurance is desirable.	Active Opposition	Assembly: HHR	In committee
A-2283 Kelly	Limits damages for noneconomic loss to $250,000 in civil suits.	Active Support	Assembly: INS	In committee
A-2373 Kavanaugh	Requires professional liability carriers to report all claims and awards to the Insurance Department. The Department then shall report to the licensing boards.	Active Opposition	Assembly: INS	In committee
A-2379	Establishes local area health planning agencies to continue the program being terminated by the federal government. Funds will be provided by the state with an offset for any federal received.	Active Opposition	Assembly: HHR	In committee
A-2380 Kern	Same as A-2379 except that this bill also appropriates $1.8 million to fund the system.	Active Opposition	Assembly: HHR	In committee
A-2400 Loveys	Establishes a three-tier monetary cap on award for pain and suffering. The caps are $5,000 for minor injury, $300,000 for major injuries, and $100,000 for all others. The bill also places limits on overall liability of public entities.	Active Support	Assembly: INS	Passed in Assembly; in Senate JUD committee
A-2401 Weidel	Eliminates joint and several liability and establishes the collateral source rule so that plaintiffs cannot collect more than once for the same loss. Establishes that state-of-the-art, adequate warning and open and obvious defenses for product liability. Provides that 95 per-	Active Support	Assembly: INS	Passed in Assembly; in Senate JUD committee

Bill	Subject	MSNJ Position	Committee	Present Status
	cent of punitive damages will be paid to the state, rather than the plaintiff. Establishes a fund to pay excess awards levied against public entities.			
A-2402 Zecker	Requires structured settlements for awards in excess of $300,000.	Active Support	Assembly: INS	Passed in Assembly; in Senate JUD committee
A-2403 Kelly	Requires arbitration of all claims below $20,000.	Active Support	Assembly: INS	Passed in Assembly; in Senate JUD committee
A-2404 Rafferty	Requires insurance companies to provide the Insurance Department with specific data to support their rate request.	Active Support	Assembly: INS	In committee
A-2428 Deverin	Provides for arbitration of claims when the noneconomic loss asserted is less than $20,000.	Active Support	Assembly: INS	In committee
A-2495 Moran	Requires the Division on Aging and the Department of Health to publish a list of doctors who charge more than Medicare allowances. Senior citizens who are charged more than Medicare allowances are encouraged to file complaints with the county office on aging.	Active Opposition	Assembly: SC	Out of committee; 2nd reading
A-2511 Doyle and Karcher	Requires health care providers to accept Medicare assignment.	Active Opposition	Assembly: HHR	In committee
A-2519 Doria	Professional liability bill.	Active Opposition	Assembly: INS	In committee
A-2535 Kelly	Authorizes nurses to prescribe medications.	Active Opposition	Assembly: HERP	In committee
A-2603 Kelly	Requires food processors and retailers to provide written notice if food has been preserved by radiation.	Active Opposition	Assembly: EDA	Out of committee; 2nd reading
A-2651 Villane	Provides for the licensing of social workers and would allow them to engage in psychotherapy.	Active Opposition	Assembly: HHR	In committee
A-2878 Doria	Permits dentists who have had their credentials approved to practice in hospitals.	Active Opposition	Assembly: HERP	In committee
A-3305 Singer	Requires licensed health care providers who treat Medicare enrollees to accept the Medicare fee determination if the beneficiary presents to the provider a valid PAAD card.	Active Opposition	Assembly: HHR	In committee
A-3434 Loveys	Amends the Insurance Fraud and Prevention Act to eliminate the verification of medical bills submitted with insurance claims.	Active Support	Assembly: INS	Passed in Assembly; in Senate committee
A-3438 Colburn	Creates a study commission to review the DRG program for its impact on the quality of care and to determine whether it should be continued.	Active Support	Assembly: HHR	Passed in Assembly; in Senate committee (IHW)
AJR-49 Felice	Directs the Commissioner of Health to study and report on the feasibility of health enterprise zones.	Active Support		Passed in Senate and Assembly

Give your angina patients what they're missing...



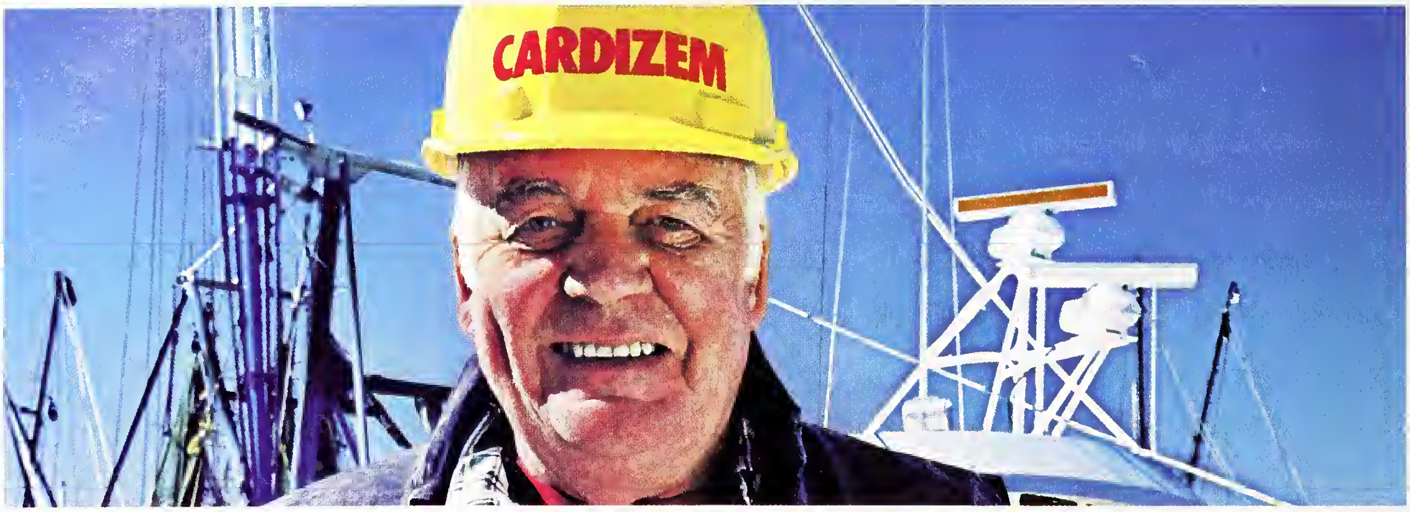
CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- **Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate**
- **Proven efficacy when used alone in angina[1]**
- **Compatible with other antianginals[2,3]***
- **A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]**

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.



CARDIZEM® diltiazem HCl/Marion

FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing.

References: 1. Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347. **2.** Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159. **3.** Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687. **4.** Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. **5.** Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.

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EDITORIAL

New Jersey Is the Winner

It is a great honor to recognize three physicians who have served their state.

There is no greater pleasure than to recognize and participate in the accomplishments of one's friends. This extolment is personal and heartfelt.

Paul J. Hirsch, M.D., was a popular choice for this year's Edward J. Ill Award, the most prestigious recognition by The Academy of Medicine of New Jersey. Paul truly exemplifies the individual who has given his all for the benefit of his patients, the community, his specialty, and organized medicine—and these were the critical areas that the developers of the award had in mind.

Paul is chief of orthopedic surgery at Somerset Medical Center and clinical associate and professor at UMDNJ-New Jersey Medical School. Anyone who has attended the Board of Trustees' monthly meetings at the Medical Society of New Jersey or attended the Board of Trustees' meetings of The Academy of Medicine had to be impressed with Dr. Hirsch in action. A fair and thoughtful man, he lives by his principles and is able to penetrate quickly to the heart of a difficult and debatable matter and to express his opinion with clarity and persuasiveness.

He always is approachable for advice and counsel, yet has diverse interests including practical applications of the computer. The major magnet away from his professional interests is his son, Jeremy, the apple of his eye.

Paul has served on innumerable committees of the Medical Society of New Jersey—he is the Treasurer—and of The Academy of Medicine, of which he is a distinguished past president.

Two of New Jersey's distinguished physicians were honored by The Governor's Awards Academy, chaired by Celeste Holm. All of New Jersey's former Governors (Meyner, Hughes, Cahill, and Byrne) participated in the program as Chairmen Emeritus. There were 11 honorees selected for The Governor's Award—the pride of New Jersey for 1987. The two physicians are members of the Medical Society of New Jersey and of The Academy of Medicine of New Jersey and both are past recipients of the Edward J. Ill Award.

Leon G. Smith, M.D., was selected for many reasons: his professional accomplishments as a practicing physician, researcher, teacher, and medical leader and his extra-professional benefactions. Smith received The Clara Barton Medical Service Award and The Governor's Medal "for outstanding effort and contributions to the welfare of human life." Leon was sponsored by The Academy of Medicine of New Jersey and the New Jersey Chapter of The American Red Cross. Dr. Smith's great and original efforts on behalf of humanity were clearly recognized in the program book:

"Losing his father at 16 was a turning point in Leon Smith's life. When Leon's father, a junk yard owner, died, the boy's mother took a job in a factory and struggled to keep a home together for Leon and his two younger sisters. During that sad and lonely time Leon wondered if better medical care could have saved his father's life. He pledged to become a doctor.

"With characteristic energy, Leon worked his way through college and medical school. Along the way, he talked Yale into making him the first Georgetown University Medical School student to be accepted as a Yale fellow. And, he also talked a young nurse, Margaret, into becoming his wife.

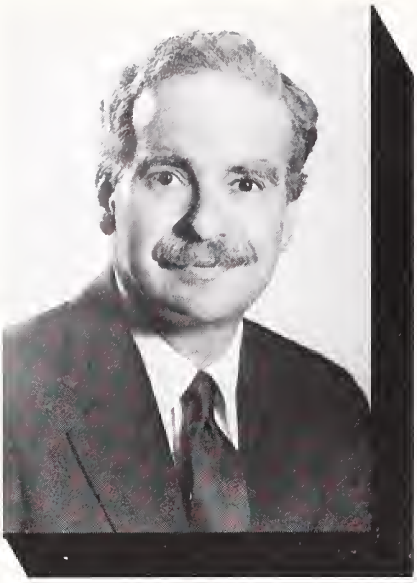
"In the following years, Dr. Smith became an internist and an expert in the treatment of infectious diseases, such as tuberculosis, meningitis, and staph infections. He started the world-renowned Intercity Infectious Disease Society. As chairman of medicine at St. Michael's Medical Center in Newark, he developed one of the best departments of medicine in New Jersey.

"He has taught over 3,000 internal medicine doctors and is an internationally respected lecturer in his field.

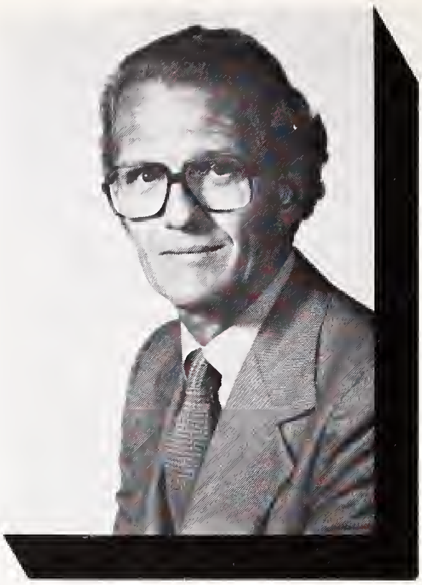
"And he never forgot the poor. During the 1960s, he and his wife founded the first free medical clinic for the poor in Newark in the basement of a Catholic Church. As a leading member of the Catholic Church, he raised funds for a bathhouse for the homeless and gave free care to leprosy patients. When a new and terrible infectious disease called AIDS struck, Dr. Smith developed New Jersey's first major AIDS center, one of the only three in the country.

"His extraordinary contributions to New Jersey medicine have earned Dr. Smith The Academy of Medicine's prestigious Edward J. Ill Award. He also has been named a Knight of Saint Gregory, the highest honor the Catholic Church bestows on a lay person. A compassionate healer who rose from a humble beginning to international stature, Leon Smith is a true American success story and a credit to New Jersey."

Stanley S. Bergen, Jr., M.D., has become a household name and the man has that charismatic personality that leads to instant recognition. His accomplishments have been cited by numerous awards in the past, many of which have been described in this journal. Stan is


Paul J. Hirsch, M.D.

Leon G. Smith, M.D.


Stanley S. Bergen, Jr., M.D.

a leader, but unlike other contemporary public administrators, he has a managerial style which is participatory and informed.

Dr. Bergen was selected for the Woodrow Wilson Public Service Award, "for contributions in public service by an individual, who may or may not be a public employee, but who has advanced or improved any of the elements of public service." He was sponsored by the New Jersey Chapters of the American Society for Public Administration.

The Awards Book description of Dr. Bergen states:

"Almost 15 years ago, Dr. Stanley S. Bergen made a professional decision that would benefit New Jersey and the world. The Princeton native chose to devote his life to medical administration rather than continue a promising career as an internist.

"Actually he had been gravitating toward that move for years as he accepted positions that were increasingly administrative in nature. But, in 1971, when Governor Cahill tapped him to become the first president of the newly created University of Medicine and Dentistry, the fork in the road was reached. Dr. Bergen committed himself to the challenge of uniting the state's diverse public health facilities into one body.

"During his 15-year tenure, the university's six schools have distinguished our state. Accomplishments include: equipping University Hospital in Newark with one of the nation's few radiation therapy machines which treat cancerous tumors more directly and efficiently during surgery; equipping the same hospital with one of the nation's most advanced units to treat patients with brain injury or illness; developing one of the first programs in the nation to teach biomedical ethics; establishing the Center for Advanced Biotechnology and Medicine, a world-class facility to research practical uses for that science, such as studying the origin of cancer cells; and developing a prenatal test, now being evaluated, for osteogenesis imperfecta, a dreaded bone disease that cripples and kills children.

"In addition, Dr. Bergen has held a variety of academic posts and has served on Governor Kean's Commission on Science and Technology. His humanitarian work has earned him many awards, including the Edward J. Ill Award from his peers in The Academy of Medicine in 1985. Behind these accomplishments, is a simple and true philosophy: 'Everybody is important. Everybody makes a contribution. Everyone should have access to medical care as part of society's contribution to them.'

"Because of Dr. Bergen's work the world is closer to seeing that compassionate philosophy become reality."

It is a great honor to New Jersey medicine to have just recognition of the contributions of a few by the awards such as Paul Hirsch, Leon Smith, and Stanley Bergen received. One only can hope that the public—and our patients—recognize the daily efforts in their behalf that the on-line practitioner of medicine is rendering and for which he often receives no special credit or compensation. I salute the honorees as well as the unsung in our state.

Arthur Krosnick, M.D.

News from DISTA about a new dosage form of cephalexin

ANNOUNCING NEW

Keflet™ TABLETS

cephalexin

All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:

250-mg Tablets

500-mg Tablets

Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

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Brief Summary. Consult the package literature for prescribing information.
Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli*, *P mirabilis*, and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers— The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity— Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP

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Additional information available to the profession on request from

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PROFESSIONAL LIABILITY COMMENTARY*

Suing for the Right Reasons

Physician Reports on Quality of Another Physician; Peer Review Position; Support for Reform Growing

PHYSICIAN REPORTING ON POOR QUALITY OF CARE OF ANOTHER PHYSICIAN

The Appellate Division of the New Jersey Superior Court recently handed down a decision which significantly will ease the risk of a physician reporting the poor quality of care rendered by another physician.

The plaintiff, an anesthesiologist, brought a defamation and malicious interference action against a surgeon who complained of the quality of the anesthesiologist's work to the head of the department of anesthesia and to some other surgeons. In addition to complaining, the surgeon refused to have the anesthesiologist work on any of his cases. The surgeon felt several deaths and other poor results on his patients were due to the anesthesiologist. The anesthesiologist asserted that the defendant surgeon had interfered with his staff appointment at the hospital and had damaged the anesthesiologist's reputation. The jury awarded the anesthesiologist compensatory damages of $400,000 and punitive damages in the amount of $200,000. The Appellate Division reversed the judgment and remanded the matter for a new trial and in so doing, set forth a new standard of determining this type of case.

The Court held that: "Each physician within a hospital community has a significant and obvious interest in the professional qualification, skill, and competence of every other health-care professional rendering services within that community and particularly those with whom he or she works directly. It therefore is not only the physician's self-interest but also the public's interest which demands that hospital staff physicians be free to express themselves openly and without fear of reprisal when matters directly affecting the quality of health care are involved. Indeed, we regard such expression, at the least, as a moral duty of each physician.

The Court held that given the facts of this case, the complaining surgeon and physicians generally have a "conditional privilege" to make such statements.

The Court further held that malice is not the standard to be used to defeat a claim of privilege but rather the "abuse of privilege" which holds that claims of privilege are lost as a defense by an abuse which consists of:

1. The speaker knowing the matter is false or acting in reckless disregard of its falsity;
2. The speaker not acting for the purpose of protecting the interest for the protection of which the privilege is given;
3. The speaker excessively publishing the matter without a reasonable belief that the publication is a proper means of communicating the defamatory matter to the person to whom his publication is privileged; or
4. The speaker does not reasonably believe the matter to be necessary to accomplish the purpose for which the privilege is given.

The Court further placed the burden of proving the abuse on the plaintiff. (Letter to MSNJ from Burton L. Eichler, Esq., Brach, Eichler, Rosenberg, Silver, Bernstein, Hammer & Gladstone, Roseland, New Jersey)

ANTITRUST DIVISION STATES POSITION ON PEER REVIEW

Peer review is an essential ingredient of professionalism and an absolute requirement for the practice of medicine in the hospital. Physicians are both subject to review and are reviewers of their peers. The threat of increasing litigation over the past few years caused the AMA to ask the U.S. Department of Justice to comment on physicians' exposure to antitrust liability arising out of their peer review activities. The following is the reply of Charles F. Rule, Acting Assistant Attorney General, Department of Justice:

> "This letter responds to your letter of November 26, 1986, requesting that the Antitrust Division of the Department of Justice address a matter that is of considerable importance to the medical community. Your letter states that many physicians are concerned about whether members of the medical staff of a hospital may incur liability under the antitrust laws when they participate in the credentialing or 'peer review' process at a hospital. You requested the Division to address the question, whether good faith peer review activities designed and reasonably conducted to prevent incompetent physicians from obtaining or maintaining staff privileges violate the antitrust laws.
>
> "It would be most unfortunate if physicians refrained from participating in hospital peer review activity because of an unwarranted fear

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*This item from the Department of Professional Liability Control, MSNJ, was prepared by James E. George, M.D., J.D., and A. Ronald Rouse, who are the Director of the Department and Director of Special Projects, respectively.

that such participation was likely to pose serious concerns under the federal antitrust laws. Put simply, there is no reason to expect a clash between the antitrust laws and peer review conducted to eliminate incompetence in the delivery of health care services. Quite to the contrary, the greatest potential of peer review is its ability to foster the basic goals of the antitrust laws in the health care industry—the efficient delivery of quality services in a competitive marketplace.

"There are fundamental reasons for the harmony between antitrust policy and legitimate peer review. Correctly interpreted, the antitrust laws reflect the fact that the protection of competition in a health care market does not dictate that a hospital accord privileges to every practitioner who desires to use its facilities—the antitrust laws protect competition, not competitors. A hospital, therefore, is justified in according privileges in a selective manner so as to maintain high standards of quality and efficiency, in furtherance of its own business and competitive objectives. In addition, a hospital legitimately may decide to deny privileges to an incompetent practitioner, based on good faith peer review conducted by the medical staff. Although the denial of privileges might make it difficult or even impossible for the practitioner to engage in his profession, such a denial does not impair competition. Rather, because the denial will enhance the quality and efficiency of health care and thereby strengthen the hospital's competitive position, peer review serves the underlying goals of the antitrust laws.

"The benefits of peer review in eliminating incompetence in the provision of health care are recognized not only in traditional antitrust analysis, but also in the "Health Care Quality Improvement Act of 1986," which the President signed on November 14, 1986. That legislation immunizes health care entities and physicians from damage liability for participating or assisting in peer review determinations that deny or restrict a physician's hospital privileges on competency grounds, provided that such determinations are reached pursuant to fair procedures and meet other specified standards. In essence, the new law provides an antitrust immunity from damages for legitimate peer review that attempts in good faith to weed out incompetent physicians.

"Compliance with the provisions of the Health Care Quality Improvement Act of 1986 should provide immunity from damages for a peer review determination denying or restricting the hospital privileges of an incompetent physician. Of course, even if a peer review determination does not qualify for such immunity, that does not necessarily mean that the peer review violates the antitrust laws. Indeed, only in the exceptional circumstance where the peer review process is not used to review individual competence but rather is a sham used to exclude a competent practitioner or group of practitioners from the market and thus to restrain competition, would an antitrust violation ever exist.

"In closing, it bears repeating that the antitrust laws do not stand in the way of physicians' participation in hospital peer review conducted to identify and restrain incompetence in the provision of health care. To the contrary, because such peer review enhances both the quality and efficiency of the services delivered in our nation's hospitals to the benefit of consumers, it furthers the antitrust goal of fostering competition in the health care marketplace." (*The Citation*, Vol. 54, No. 7, January 15, 1987)

AWARENESS OF MALPRACTICE ISSUES GROWS AMONG PUBLIC: SUPPORT FOR REFORM SEEN

Americans are exhibiting a declining confidence in the American civil justice system to operate fairly, due to a rising belief in the view that people are more likely to sue for personal injuries today, and a perception that awards in such suits are too high.

A poll conducted by the Roper Organization among 1,491 Americans nationwide for the All-Industry Research Advisory Council, which conducts public policy research for the property/casualty industry, indicated that 84 percent of the respondents think people are more likely to sue today than in the past and 78 percent think that personal injury awards are higher. Of these, 58 percent said these awards were too high, 20 percent said they were about right, 4 percent said they were too low, and 17 percent said they did not know or did not answer the question.

Confidence in the U.S. civil justice system declined even further. Only one of four respondents (26 percent) said the system was fair to plaintiffs and defendants. In a 1985 survey, 31 percent said the system worked equitably.

Respondents generally said increased publicity about larger awards, high medical costs to treat injuries, and widespread belief by judges and juries that insurance will pick up the tab, all contribute to bigger judgments. Twenty-nine percent blamed lawyers interested in lining their own pockets for award increases.

Nearly two-thirds (64 percent) of the respondents said the trend toward more suits and larger awards will result in a higher consumer price index and diminished availability of medical services.

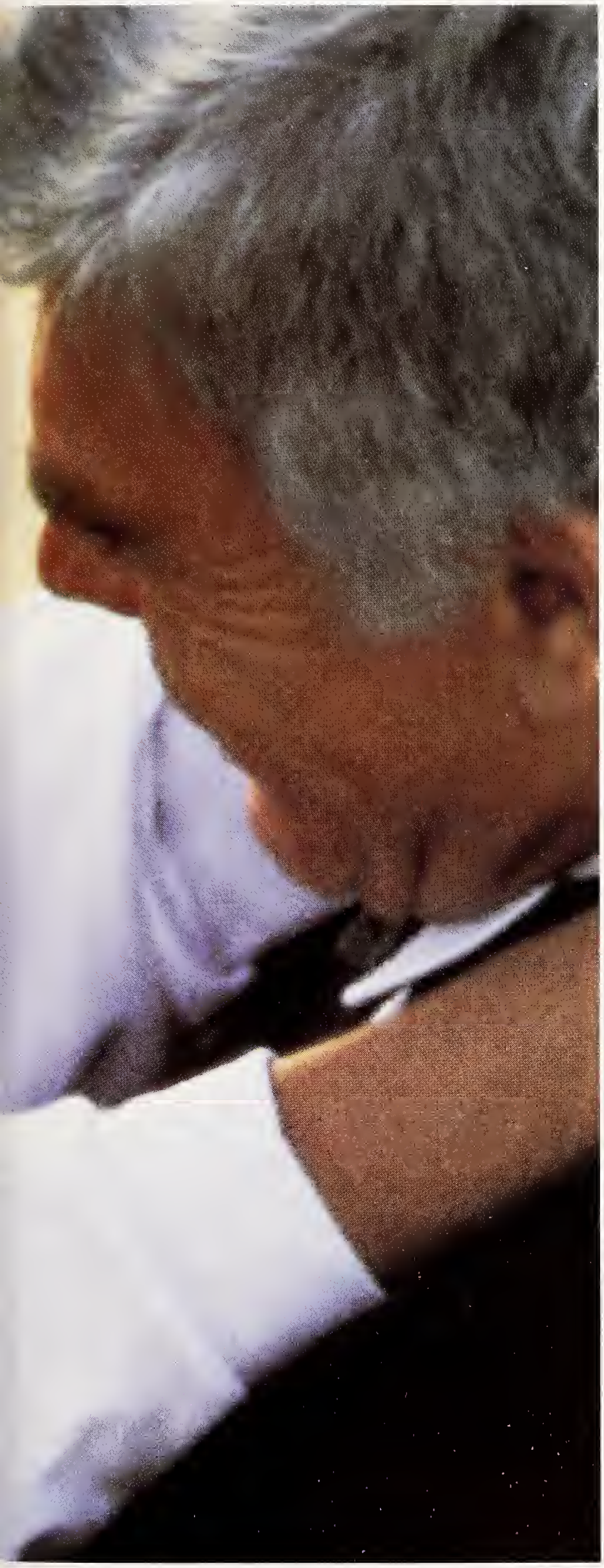
Sixty-two percent believe juries should be informed about the compensation a plaintiff receives from other sources for an injury.

There was an 18-point increase in the number of respondents aware of the medical malpractice issue—up from 67 percent in 1983 to 85 percent in 1986.

An overwhelming majority (82 percent) favor second opinions before surgery in a medical procedure and 59 percent favor limiting attorneys' fees in medical malpractice suits. A larger number—45 percent as compared to 28 percent in 1983—now favor limits on awards. (*Medical Liability Monitor*, Vol. 12, No. 2, February 28, 1987)

There's never been a better time for her..

and PREMARIN®



Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis[1] and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

PREMARIN®
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN®

(conjugated estrogens tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®

(conjugated estrogens)

Vaginal Cream

0.625 mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTEO TO INCREASE THE RISK OF ENOOMETRIAL CARCINOMA.

Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2. ESTROGENS SHOULO NOT BE USEO OURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tendernes abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause an blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed i patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefull observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to th initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organ and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer tha one year without another physical examination being performed. Conditions influenced by fluid retention, suc as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients ma develop manifestations of excessive estrogenic stimutation, such as abnormal or excessive uterine bleedin mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the ris of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increase incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existin uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estroge therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, th medication should be discontinued while the cause is investigated. Estrogens should be used with care i patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemi or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potenti risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrin induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, a measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting th elevated TBG; free T_4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Oecreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clear necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increas the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controll study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogen

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral co traceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-li syndrome, amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasi change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargeme secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhag eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headach migraine, dizziness, mental depression, chorea, increase or decrease in weight; reduced carbohydrate toleranc aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe *vasomotor* symptoms, atroph vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest do that will control symptoms should be chosen and medication should be discontinued as promptly as possibl Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or tap medication should be made at three- to six-month intervals

2. *Given cyclically:* Osteoporosis. Female castration. Osteoporosis —0.625 mg daily. Administration should b cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provi effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measur taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer a appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurri abnormal vaginal bleeding.

References:

1. Lindsay R, Hart OM, Clark DM: The minimum effective dose of estrogen for prevention of postmenopaus bone loss. *Obstet Gynecol* 1984;63:759-763. **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention a treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetto Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 198 chap 13.

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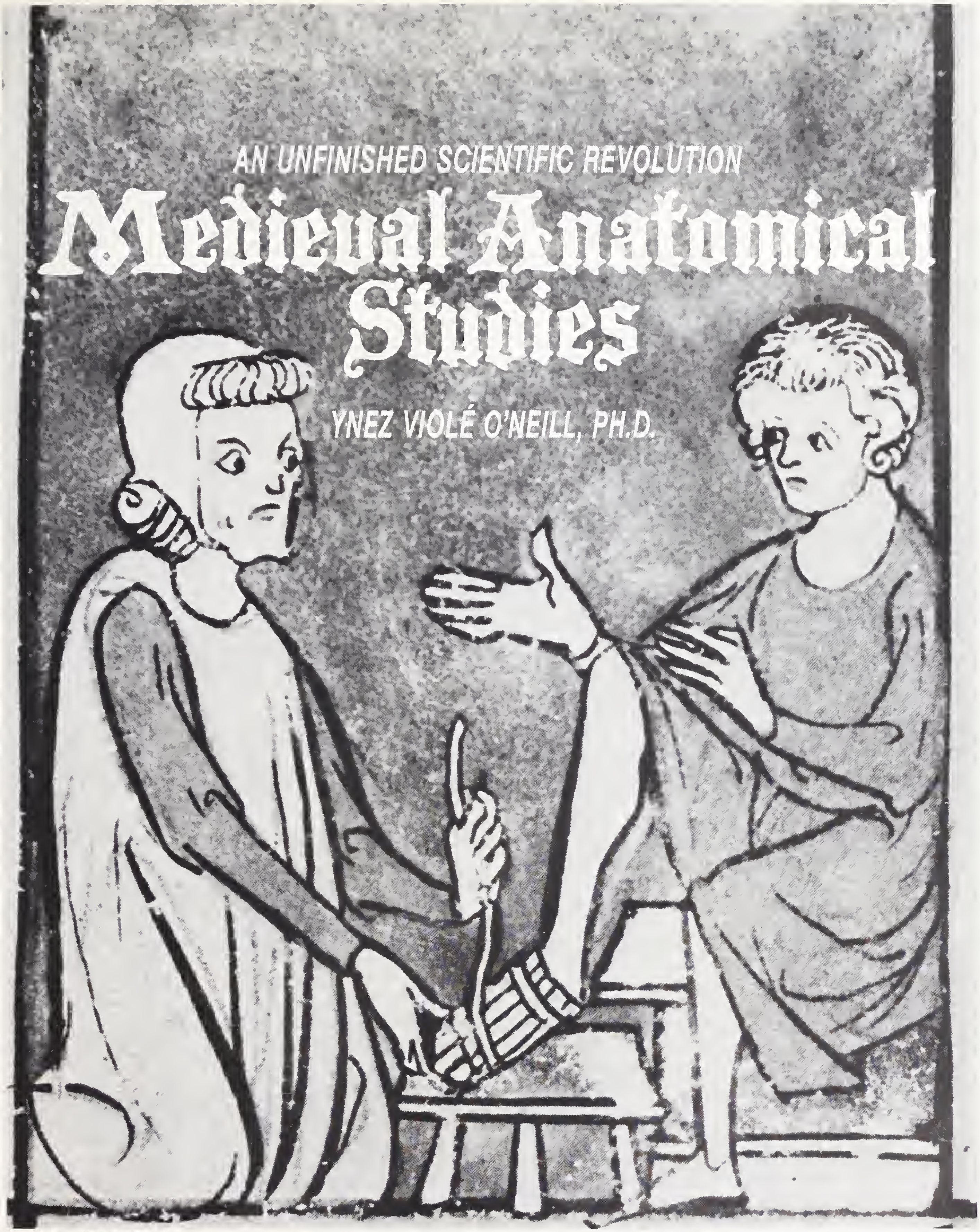
AN UNFINISHED SCIENTIFIC REVOLUTION

Medieval Anatomical Studies

YNEZ VIOLÉ O'NEILL, PH.D.



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For those who seek continuity in history, the history of anatomy offers interesting challenges. Classicists, for example, may puzzle over the curious case of Alexandrian burn-out. Why did the promising practice of human dissection which flourished in Ptolemaic Alexandria for about 50 years (between 300 and 250 B.C.) die out so suddenly? Herophilus and Erasistratus, Alexandria's two principal dissectors, hardly can be blamed.[1]

Even Galen who, some 400 years after their deaths, alternatively revered and reviled his Alexandrian predecessors, never accused them of indolence, nor denied that their investigations had produced important data. And Galen's reproaches, we should remember, always

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were tinged with envy. Like the two Alexandrians, he too was a Greek genius, who has been lured by its ruler to the world's most powerful cosmopolitan center. He too was a Greek genius, who had been lured by its ruler them, he never was allowed to dissect a human cadaver. Unable to test Herophilus' morphological observations, or to repeat Erasistratus' physiological findings on a human body, Galen lamented and frequently reminds us that his anatomy and physiology were based exclusively on animal dissection.[2]

Inspired by Galen's example, and seeking to recreate his findings, Salernitan physicians began to dissect animals at least by the second half of the 11th century. The three surviving manuals which document this activity, the *Anatomia porci*, the *Anatomical Demonstration*, which is known by some as the *Second Salernitan Demonstration*, and the only one of the trilogy whose author is named, the *Anatomia Mauri*, substantiate that animal dissection formed an important part of the 12th century medical curriculum at Salerno.[3] Moreover, they leave little doubt that their authors actually performed the procedures they described, as this description of the minute veins leading from the vena cava to the liver demonstrates:

> Then you will see little hair-like veins in the hump of the liver where the vena cava is. In this way—next to the beginning of the vena cava, break off some of the liver substance, and rub it between your fingers, and the veins will appear to you. They are small, round and thin, like hairs. A year ago, at our dissection, a person said that they were nerves, and we could not refute him at the time. Therefore to rebut that contention, we now show all of you these vessels, red and full of blood, which have their beginnings in the vena cava.[4]

Where did these empirical demonstrations lead? What influence did they exert on the later development of anatomy and physiology as academic disciplines? Why are they separated in traditional histories of anatomy from the earliest known European dissections of human cadavers by almost as wide and murky a gulf as the hiatus between the Alexandrians and Galen? What happened during the 13th century that permitted educators to advance from dissecting the bodies of animals to scientifically inspecting human structure?

Historians believed that surgeons first began to partially dissect human cadavers in the medieval West to achieve legal not medical goals. They have identified its first instance as the medico-juridical autopsy performed at Bologna in 1302 on a suspected victim of poisoning.[5] Several years ago, I managed to show that records of medico-legal dissections appear in the decretals of Innocent III, which were published in the first decades of the 13th century.[6]

Now, I propose to add another prime mover to the process, to suggest that surgical needs and successes also contributed to the practice of conducting human dissections in the Latin West, a privilege which had been denied Galen, the prince of physicians, and all of his successors including the Salernitan anatomists and surgeons. I believe that the development of a school of surgical thought and practice at Bologna in the 13th century represented a genuine, if incomplete, scientific revolution. This revolution, though its main thrust was not sustained, anticipated and was characterized by three notable later advances in anatomy and surgery: the advocacy of healing by first intention, the employment of human dissection in the training of surgeons, and the use of illustrations as teaching aids in surgico-anatomical texts.

Salerno's early promise in anatomy was not sustained. Discouraged, perhaps, by their inability or unwillingness to dissect human structure, Salernitan investigators turned from empirical investigations back toward their ever-increasing store of translations rendered from the Arabic. By the second half of the 12th century, the Salernitan anatomical manual had lost its practical flavor.[7] It had evolved into a well-organized formal treatise which, though purporting to deal with human anatomy, contained no hint that its author had ever dissected anything away from his own dinner table.

Our attention shifts at this point from academic anatomists to surgeons, who then, as now, were a pragmatic lot. Anatomists, like physicians, especially academic physicians, may theorize, but surgeons must act.

The empirical and imperative nature of the craft displays itself about the middle of the 12th century when a genuine school of surgical practice developed at Salerno under the leadership of Master Roger Frugardi. Roger's precepts and methods were so original that his followers felt they should be recorded. But as they were not bookish men, they hired a logician to organize Roger's findings and techniques into a systematic textbook of operative and medicative surgery. As its colophon explains, "This work was arranged in light and order by Guido Aretino, a servant of the profession of logic, at the request of his distinguished colleagues and by the permission and desire of the eminent doctor, in the year after the incarnation of our Lord, 1170."[8]

This codification of Salernitan surgical doctrines, (called the *Post mundi fabricam*, or "after the creation of the world") enjoyed enormous success and Salernitan or Rogerian surgery dominated European surgical practice for over 40 years.

About 1220, however, two proud matrons, Salerno and Bologna, began to vie for surgical hegemony. Primacy in surgery brought a municipality not only civic pride but, as today, considerable financial advantages. At first, in the 12th century, Salerno's lead seemed insurmountable. Stimulated by the Crusades, for war is surgery's mother, excited by new translations from the Arab world, and encouraged by its previously mentioned interest in vertebrate anatomy, Salerno seemed the ideal cradle for nurturing the development of European surgical arts.

From the beginning of the 13th century, however, Bologna gained steadily on her southern sister. Spurred by her example, and endowed with a vital group of physicians and surgeons who preferred to learn from experience rather than from authoritative dicta, Bologna overtook Salerno about 1250, and from that time onward, Bolognese surgical doctrines and traditions spread quickly throughout Christendom where they were to persist in some districts until well into the 17th century.

Like jockeys in the Corsa al Palio, moreover, the participants in this urban rivalry never hesitated to gibe at one another, to deprecate their opponent's surgical successes, and to vaunt their own as well as their colleague's surgical prowess. Expressions of this antagonism enliven their surgical writings.

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One such instance is in the discussions of the two schools on the proper treatment of cranial and thoracic wounds. In an age of jousting and of warfare conducted mainly with maces, lances, and arrows, head and chest wounds were relatively common. Roger discussed these topics in the third book of *Post mundi fabricam*, which, though written by a practicing surgeon, was influenced by classical and Islamic authoritative writings chiefly as rendered by Constantine the African. Their influence is manifest in Roger's acceptance of the classical proposition that suppuration, the accumulation of pus, was necessary and beneficial in wound healing.[9] This deleterious doctrine, often termed the "laudable pus theory," influenced thinking about wound healing well into the 19th century.[10] This theory also was adopted by Roland of Parma, Roger's most important disciple, who carried the tenets of Salernitan surgery to Lombardy and beyond.

Roland, before 1250, wrote the so-called *Chirurgia rolandina*, an elaborate commentary on the *Post mundi fabricam*. Though Roger addressed his treatise to experienced surgeons, Roland's work seems directed toward the instruction of novices in the surgical arts. A teacher, rather than an experienced practitioner, Roland nevertheless pretended to have performed heroic surgery on a patient who had suffered a serious and complicated chest wound.[11]

An unusual instance of filial devotion soon confounded Roland's attempt at self-glorification. Hugh of Lucca, a highly skilled surgeon, was one of Roland's contemporaries and a most worthy rival. Hugh had been appointed municipal surgeon at Bologna in 1214, and five years later had accompanied Bolognese crusaders to Syria and Egypt. When he returned, he devoted himself to surgical practice and gained a distinguished reputation as an original and innovative practitioner. The popular and professional esteem Hugh enjoyed contributed greatly to making Bologna Christendom's foremost surgical center.[12]

Although Hugh composed no surgical text, one of his sons, Theodoric, wrote a *Chirurgia magna* in which he recorded both Hugh's experiences, and some of his own. Theodoric's version of the nobleman's chest wound differs in several crucial respects from Roland's self-serving account. Theodoric tells us that while Hugh was the surgeon who performed the life-saving procedure on Domicellus, the patient, Roland was merely one of the spectators. In Theodoric's words,

> Such a man as Roland commends himself to us, and having clothed himself in the fleece of another, strains to lengthen his fringes, because he cured someone without tearing away even a little bit of the lung. The truth of the matter is that, while I was living in Bologna, a certain Domicellus, a Bolognian of noble birth, was cured by the hand of Master Hugo, part of his lung being torn away, and Master Roland was present there and witnessed it.[13]

Family pride certainly was one of the motivating factors in Theodoric's recapitulation and clarification of Domicellus' case, but it was not the only one. Like his three brothers, Theodoric was trained in medicine and surgery by their father. Although he later joined the Dominican Order, and became successively Bishop of Bitonto about 1262, and Bishop of Cervia in 1266, Theodoric always lived and practiced medicine and surgery in Bologna.[14]

The chief aim of his book was to demonstrate that the surgical doctrines developed by Hugh and his followers at Bologna, because they were clinically tested, because they better healed injuries which at that time were being presented to European surgeons, not only excelled, but should supplant those of the Salernitan school. Considering his purpose, Theodoric found an ideal target in one of the most pervasive but least empirically based of Roger's teachings, the laudable pus theory.

While discussing scalp wounds, Theodoric tells us, "For it is not necessary to generate pus in a wound, as Roger and Roland and many of their disciples teach, and as almost all modern surgeons continue to do. There can be no greater error. For it does nothing else than hinder the work of nature, prolongs the sickness, prevents the uniting and consolidating of a wound, deforms the part, and impedes cicatrization."[15]

Theodoric, following in Hugh's footsteps, advocated the uniting and consolidating of wounds by "first intention" or *per primum* healing, by which the parts are united directly without the intervention of granulations, a doctrine which has been viewed as anticipating modern principles of wound healing. Surgeons today attempt to provide optimal healing conditions by asepsis, careful hemostasis, the elimination of necrotic tissue and foreign matter, the avoidance of dead space, the accurate approximation of wound walls, and subsequent rest and protection of the area.

In advocating *per primum* healing, Hugh and Theodoric can be considered, in I. Bernard Cohen's terms, to have begun to achieve the first in the four stages Cohen believes essential for a genuine scientific revolution. They created a new idea, an idea which broke with tradition, and which they maintained despite contrary authoritative dicta.[16]

After emphasizing the superiority of a *per primum* therapeutic regime, Theodoric sounds another keynote of the Bolognese theme at the conclusion of his treatise, "I have not put anything into this book which I have not tested for I did not wish my work to contain more of other men's ideas than my own."[17]

The same Bolognese pragmatism and concern with the "uniting and consolidation of wounds" characterizes the writings of one of Theodoric's slightly younger contemporary surgeons, William of Saliceto. A native of Piacenzia, William was a physician and a cleric who, after studying and teaching at Bologna, completed a radically different surgical text in 1275 while serving as municipal surgeon at Verona. Having tested his theoretical knowledge on battlefields and in hospitals and prisons, William insisted that surgery must be based on practical experience, and therefore supported his findings exclusively with case histories drawn from his own practice.[18]

All of his procedures are described without recourse to scholastic arguments or to the authoritative statements of others, even including illustrations of the instruments necessary for the procedures described. He places his work firmly in the historical world of empirical observations rather than in the eternal world of scholastic deduction. He then authenticates his treatise by closing it with the specific day and year it was completed, ending with a most pragmatic if immodest guarantee, "from the nature of its material and arrangement, it will make anyone who studies it a good surgeon and a good physician."[19]

The work's most striking single innovation, however, is the separate chapter William included on human anatomy. This section, the fourth of a five-book treatise, is arresting because it is based at least partially on information William obtained by performing postmortem examinations on his deceased patients. It is, therefore, the first integral anatomical treatise written since Ptolemaic Alexandria which is based at least in part on empirical evidence its author obtained from human dissection.

William's incorporation of an anatomical study into his *Chirurgia magna* set a precedent for others who succeeded him. Both Lanfranc of Milan, William's student, who carried the doctrines and traditions of the Bolognese school to Northern Europe, and Henri de Mondeville, who performed human dissection while teaching at Montpellier, followed William's lead by including anatomical accounts in their surgical treatises.

You will hear of these men later, but what concerns us here is not who followed William's example, but the impetus he gave to the emerging surgical revolution, which his successors called the New Surgery. Hugh and Theodoric had stressed *per primum* healing and the importance for surgical training of a precise knowledge of human anatomy, William's innovation was to devote a separate and entire chapter of his work to anatomical data, elaborating its importance to first intention healing in a more systematic way.

When compared to later Salernitan anatomical writings, William's fourth chapter has a surprisingly modern aspect. The body is no longer sectioned into the traditional classical and Salernitan tripartite categories of *membra animalia, spiritualia,* and *nutritiva.* William divides the human body instead into five regions which approximate the sections in a 20th century topographical anatomy. Each region is discussed from the viewpoint of a surgeon. Beginning with the head and neck, William then analyzes successively the upper extremities, the thorax, the abdomen, the pelvis, and the lower extremities.

William's goal, as he tells us, is not to produce a purely descriptive anatomy, but to provide his students with knowledge necessary to permit them to perform the surgical procedures he describes elsewhere: "Therefore, it seems to me to be better and more useful to proceed generally in anatomy, as I promised, that is in exposing the number, and the form, and the site, and location of the members which can be made manifest to the senses, so that you, in the course of incisions, cauteries, and manual procedures can proceed in them without error."

William is concerned with individual organs and regions not from a theoretical standpoint, but just as a surgeon would be during an operation. For this reason, he especially is interested with the innervation and vascular supply of the body's various parts.[20] In sum, this original, concise anatomical text deals briefly, but completely, with its subject, which is not comparative, but exclusively human anatomy.

By elaborating and codifying the principles he inherited from Hugh and Theodoric, William accomplished the second stage which Cohen holds intrinsic for a scientific revolution. At this stage, the novel and unconventional ideas are worked out, mostly in private or among a very close coterie of students and colleagues, so that specialists in the field, other than the innovators themselves, may be convinced of the doctrine's validity.[21]

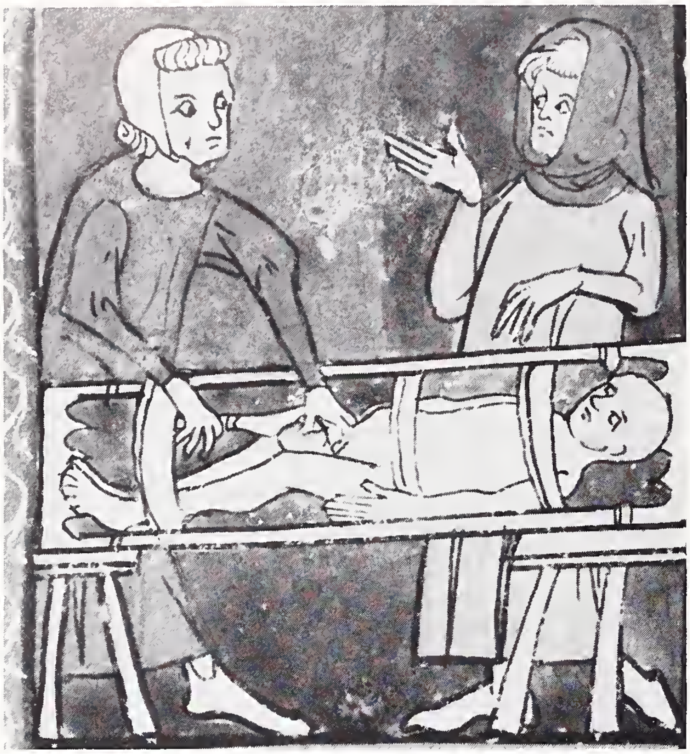
The third stage, according to Cohen's scheme, involves dissemination in professional circles. The professionals to whom William transmitted the New Surgery were initially his most famous disciple, Lanfranc of Milan, who is credited with first bringing the doctrines and methods of the Bolognese school to northern Europe, and Henri de Mondeville.

After completing his training with William at Bologna, Lanfranc, who was a cleric, a physician, and a surgeon, returned to his native city. About 1290, he was driven into exile by the Visconti despots, and found refuge first in Lyons and later in Paris, where he presumedly first met Henri whom he seems to have indoctrinated with the principles of the New Surgery.

Though most scholars believe that he began surgical studies in Montpellier, many still disagree about where Henri took his later surgical training. In her recent book, Marie-Christine Pouchelle discusses some of the principal theories advanced on this subject, but C.H. Talbot firmly linked Henri's surgical training to the French master surgeon, Jean Pitard, who taught in Paris and was also a surgeon to the French king, Philippe le Bel. Talbot further maintains that Henri gained surgical experience while serving with the royal armies and also that he traveled to England in the retinue of the king's brother, Charles de Valois. Others suggest that after studying in Paris with Pitard, and perhaps with Pitard's colleague, Lanfranc, Henri may have travelled to the fountainhead, studying in Bologna with Theodoric, who lived to the ripe old age of 93. After absorbing the doctrines of the New Surgery in Paris and perhaps Bologna, Henri returned to France where he forged strong links between Bolognese and French surgery. Michael Klein has detailed Henri's exposition and application of the New Surgery's principles.[22]

In 1296, Lanfranc finished his *Chirurgia magna* and dedicated it to the French King, Philippe le Bel. An English translation survives in a manuscript from 1380, and the work was rendered again into English in 1420. Both of these versions are available in an edition published in the nineteenth century.[23] Lanfranc's *Chirurgia* would seem to be the earliest surgical and anatomical work incorporating the principles of the New Surgery to appear in the English language. More important for our argument, Lanfranc and his *Chirurgia* demonstrate that the New Surgery accomplished the third stage in Cohen's schema. Cohen calls this stage the "revolution on paper," and as any good paleographer will tell you, in fact, this was the first century that such a revolution could have been on paper.[24]

Even more dedicated to the furthering of this paper revolution, Henri de Mondeville composed a *Chirurgia* which transmitted the doctrines of the New Surgery to transmontane Europe. A manuscript containing both translations of Mondeville's *Chirurgia,* and an original treatise written by an English surgeon who depends heavily on the writings of Lanfranc and Mondeville recently has been edited by Richard Grothé, a young Canadian scholar. The medieval author, "a Surgeon of London," dates his work 1392, thus attesting to the persistence of Henri's influence throughout the 14th century, at least in obscure backwaters like England.[25]



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An additional innovation which Henri introduced into his text and teaching was the use of anatomical drawings of human structure. As Sudhoff tells us, Henri owed his knowledge of anatomy to the Bolognese tradition. We know, moreover, that in 1304, Henri conducted anatomical lectures at the burgeoning medical school of Montpellier. His efforts would seem to be the first attempt to introduce visual instruction into the curriculum of natural science and the healing arts since the times of Aristotle and the Alexandrian's.

Although these figures were believed originally to have been life-sized, the only vestiges of them known to us are the 14 miniatures found in a manuscript of a French translation of Henri's work now in the Bibliothéque Nationale. Though the drawings may not attract the attention of art historians nor of modern scientists, Sudhoff believed that they were of great historical interest, maintaining that Henri's style of illustration also forged a link between the stylized illustrations of the only known 12th century illustrated anatomical manual and the Vesalian illustrations of graphic internal anatomy.[26] In the interval, between Mondeville and Vesalius, the figures in Guido da Vigevano's surgical manual certainly could have served as intermediaries.[27]

That Henri attempted and was initially successful in carrying on the traditions and doctrines of the New Surgery into France and England can be and has been demonstrated. But what happened, why didn't this revolution take place? What went wrong?

For the beginning of an answer, let us turn to Henri's own words in his *Chirurgia*,

> From certain persons and doctors, always, and on the occasion of each new treatment we have endured arguments and words so violent that half overcome and worn out at such opposition, we had almost renounced this treatment, and we would have completely abandoned it, God knows, but the most serene Prince Charles Count of Valois, came to our aid as did certain others who had seen us earlier in the field treating wounds according to this method. In addition, we had been sustained by the truth for which man ought rather endure death than accede to error. God, is he not the very truth, and did he not wish to suffer death for it? But if we had not been strong in the faith, known to be in the king's favor, royal doctors, and somewhat learned, it would have been necessary for us to abandon this treatment.[28]

Thus, by the second decade of the 14th century, Henri seemed well aware that this valiant attempt to reform and revise surgical theory and practice was doomed to failure. Though swimming against the tide, he seems to be trying to inspire young practitioners to risk professional martyrdom for the sake of truth. Sensing the approaching twilight of the New Surgery, he struggles, trying to rouse converts to the new doctrine.

But he failed. The New Surgery never accomplished the fourth and final essential stage in Cohen's sequence. It never became integrated into the theoretical systems of academic medicine, nor into the accepted practice of contemporary surgeons. The revolution on paper never became a revolution in science. Exploring the reasons for its failure far exceeds the limits of this presentation, but let it suffice to mention three possible contributory factors. One is the negative effects of Guy de Chauliac's influence. The second is the devastating mortality rates among young practicing surgeons caused by the plague epidemic of 1347-1349. The third is the resurgence of classical ideas which accomplished the rise of medical humanism.

In short, the new theory generally was not accepted by qualified scientists. This process characteristically involves not persuasion, but conversion, as Cohen and others have observed, and as Henri himself unmistakably implies.[29] The New Surgery never inspired a sufficient number of charismatic teachers and practitioners and never attracted enough converts to replace the 14th century equivalent of conventional science.

A modern commentator recently has remarked, "Most working scientists belong to the main stream, agreeing more than they disagree with each other about the basics of their fields. The system is maintained by the pressures of academic promotions, peer review, government grants, and, happily, the truth."[30] The New Surgery and its adherents in the 13th and 14th centuries attest to the fact that most of these things were also operative then, but in this instance, unhappily, the truth did not emerge.

REFERENCES

A copy of the reference list is available upon request.

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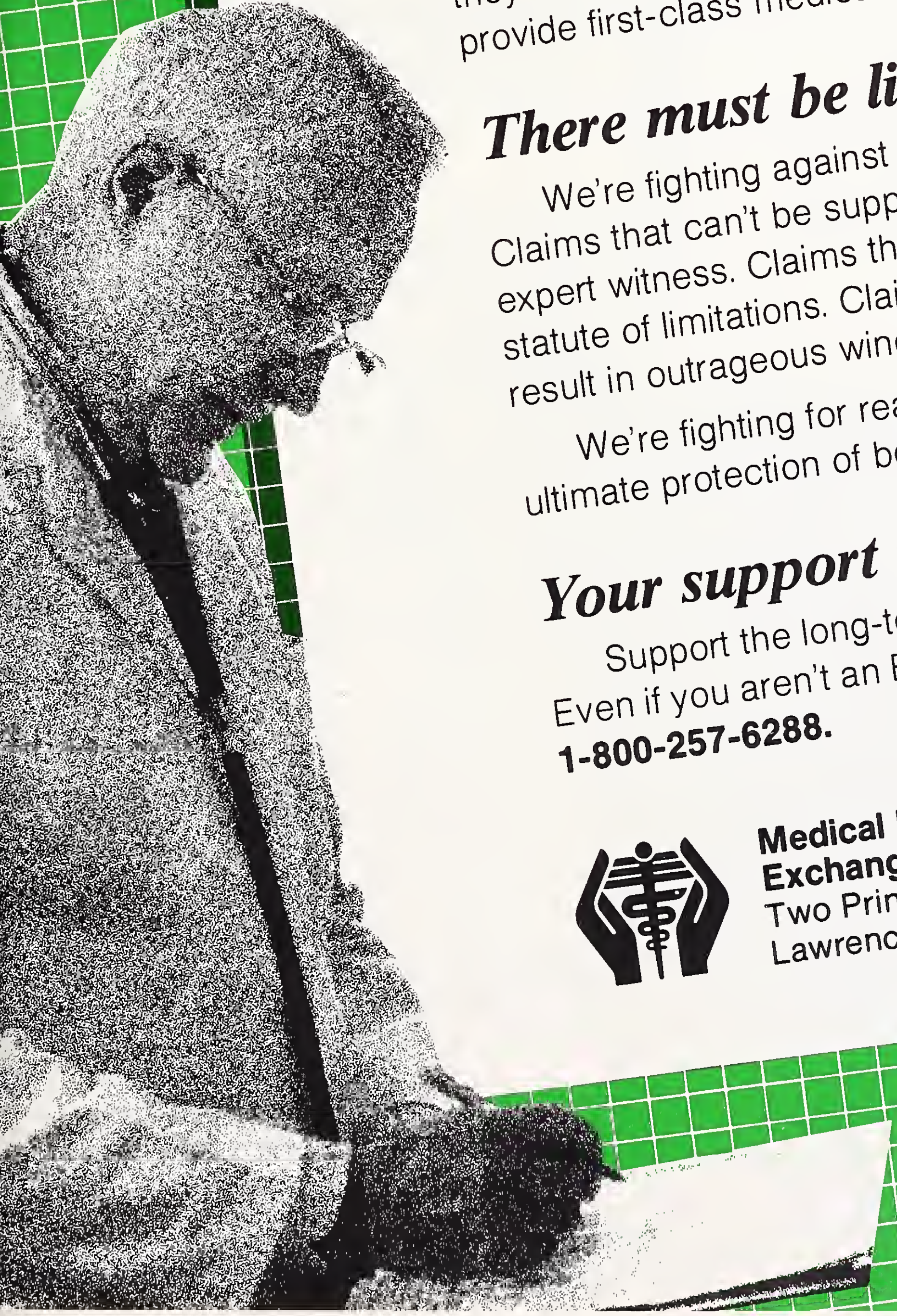

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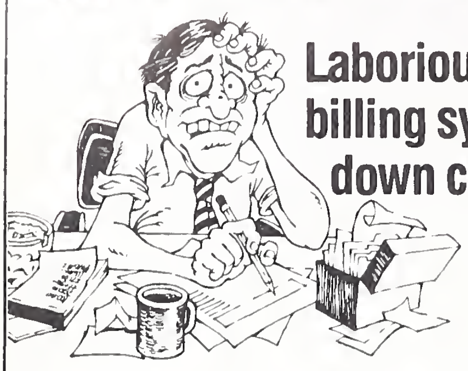

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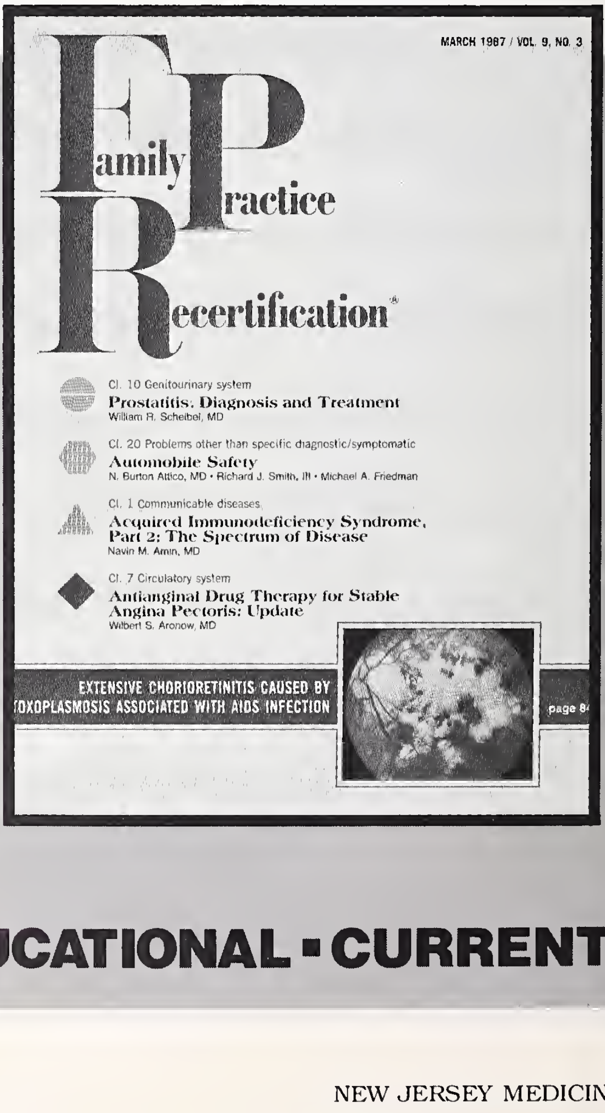

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PRACTICAL ▪ CLINICAL ▪ EDUCATIONAL ▪ CURRENT

TEENAGE SUICIDE: CAUSES, WARNING SIGNS, AND INTERVENTIONS

DIANE K. SHRIER, M.D., NEWARK*

Suicide is the third leading cause of death of persons 15 to 24 years old. Professionals involved in the care of adolescents can help to reduce the risk of suicide.

One of the great tragedies of our time is the dramatic increase in completed and attempted suicide among adolescents and young adults. In fact, the three leading causes of death in this age group—accidents, suicides, and homicides—are all preventable.

According to the National Center for Health Statistics, the suicide rate for persons aged 15 to 24 years tripled between 1950 and 1980. The rates do seem to be leveling off now, with the peak years being 1977 and 1978.[1] Suicide now is the third leading cause of death in this age group with more than 5,200 completed suicides in 1980.[2] But, suicide is grossly underreported because of the associated social stigma and because of the difficulty in establishing suicidal intent in many cases where no note is left. Most often, a suicide will be reported as an accident and accidents are the leading cause of death in adolescents and young adults. Frequently, the cause of death is an automobile accident involving drugs or alcohol. It is estimated that adolescents make approximately 500,000 suicide attempts each year. This is more than 100 times the number of reported suicides so it is clear that the problem is of epidemic proportions.[3,4]

This paper will describe: multiple causes for adolescent suicide, some warning signs, and methods for preventive and therapeutic interventions for those who either have attempted suicide or are at risk for doing so. The reader should keep in mind that most of what we know about adolescent suicide is from studies of suicide attempters rather than from psychological autopsies of suicide completers. And, we know that suicide attempters are a very different population from suicide completers.[5] Suicide completers are 4:1 males to females, more commonly white males, most commonly committing suicide with a gun or less often by hanging. Suicide attempters are nearly 4:1 females to males with 80 percent of the attempts involving drugs. Most studies of suicide attempters include, and fail to distinguish among, several subgroups. A suicide attempter may include: 1) youngsters with significant suicidal ideation; 2) young persons who engage in life-threatening behaviors that have clear-cut potentially fatal consequences such as a diabetic or epileptic who fails to take medication; 3) those who repeatedly drive while intoxicated or otherwise indicate indifference to whether they live or die; 4) youngsters who make suicidal gestures, such as ingestions of less than 20 pills or scratching wrist or throat, with or without clear-cut suicidal intent; and 5) those who are suicide failures who inflicted themselves with a potentially lethal injury and issued a statement of suicidal intent.[6]

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*Dr. Shrier is Clinical Associate Professor of Psychiatry and Pediatrics and Director of Child and Adolescent Psychiatry, Department of Psychiatry and Mental Health Science, UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. Shrier, UMDNJ-New Jersey Medical School, B60C-CMHC, 100 Bergen Street, Newark, NJ 07103.

CAUSES OF TEENAGE SUICIDE

The causes and motivations for an adolescent or young adult attempting suicide are multiple and include developmental, sociocultural, and individual psychological and family factors.[7,8] No single factor or even cluster of factors is highly predictive of an individual adolescent actually making a suicide attempt[9,10] with two possible exceptions: a history of a previous suicide attempt and a strong feeling of hopelessness.[11] The developmental and sociocultural factors increase the vulnerability for suicide primarily by impacting on individual and family factors.

Developmental factors may help to explain why adolescence has been the only age group with a rising death rate. That period is one of the normal developmental crisis points for the individual and the family. In this time of dramatic changes and potential stress, the adolescent must adjust to changes in size, shape, and cognition and to upsurges of sexual and aggressive feelings. Simultaneously, he needs to accomplish the tasks of psychological separation from parents, to develop the capacity for intimate relationships, to establish a sexual orientation, and to make career choices. Mood swings, overreactions, impulsivity, and immature judgments in many adolescents combine with a fascination with death and a preoccupation with the meaning of life and death. For these reasons, at least suicidal ideation is likely to be increased in this age group.[12]

Socioculturally, we live in a rapidly changing society with many of the conditions that the French sociologist, Emile Durkheim, described, in 1897, as increasing the risk of suicides.[13] These are the lack of strong ties to any community, feelings of alienation from society, of living in an impersonal world where one does not count, and of being overwhelmed by forces over which one has no control.

A variety of rapid changes in our society have increased the numbers of adolescents who, feeling less secure and more confused and unsupported, are at risk for depression, hopelessness, and suicide. Changes in family structure due to the divorce rate of over one million per year and the increased numbers of teenage single parents have caused 20 to 40 percent of all minor children to spend many years of their childhood in single-parent families. Two working parents are likely to be out of the house simultaneously, leaving inadequate or no substitute caregivers. Changes in morality, sexual attitudes, and behavior pressure youngsters into sexual activity before they are emotionally capable of handling it. Increased availability and use of alcohol and drugs at younger ages, a declining belief in organized religion, a shrinking job market, and the threat of a potential nuclear holocaust, increase the number of adolescents who meet Durkheim's criteria for risk of suicide.

The most significant risk factors lie within the individual and the family. A careful psychological history of the suicidal adolescent generally will reveal early childhood experiences of parental loss through death, separation, or emotional deprivation, and current severe family conflict and poor communication patterns.[14-18] Potentially suicidal adolescents more frequently have a family history of completed suicide, suicide attempts and threats, parental alcoholism, chronic physical illness, sexual abuse, and cognitive or learning difficulties.[19]

The potentially suicidal person usually gives many verbal and behavioral clues, hoping others will intervene.

The most commonly reported immediate precipitant for a suicide attempt in adolescence is rejection by a boyfriend or girlfriend. Other common precipitants are perceived or actual failure at school and conflict with parents. These incidents, however, often are just the last straw for the adolescent who has felt increasingly alone, misunderstood, and unsupported emotionally. The current precipitating incident is misperceived as overwhelming loss of a loved one or loss of self-esteem without hope of future rectification or happiness. This loss links up with previous more traumatic losses which had not been adequately resolved.[20]

At least two-thirds of adolescent suicide attempters suffer from depression with sustained depressed mood, appetite and sleep disturbances, and reduced interest and effectiveness in social and academic functioning. Borderline personality disorders with impulsivity, unstable relationships, inappropriate anger, and chronic feelings of emptiness also are more common.[5]

WARNING SIGNS OF SUICIDE

Suicide rarely happens without warning. The potentially suicidal person usually gives many verbal and behavorial clues in hopes that others will intervene. Often, a visit to a physician occurred within a month or two of the attempt in the hope that the right questions would be asked so that the youngster could get help for his hopelessness and depression.

Some of the warning signs of suicide[7] include the following:

1) **Talk of suicide.** An adolescent may issue such self-negating statements as "One day I'll kill myself" or "Everyone would be better off if I were dead." A preoccupation with death is important. The myth that people who talk about suicide do not do it is false. The vast majority of those who commit suicide have given definite warnings to others of their intentions.

2) **Planning for death.** The individual who puts his affairs in order and gives away his most prized possessions, such as jewelry, favorite records, or a camera, is suspect.

3) **Symptoms of serious depression.** The symptoms include:

a) A loss of interest in former activities, withdrawal from social contact and, most commonly in adolescents, a decline in school grades.[21]

b) Variable feelings of sadness, loneliness, emptiness, and mood swings.

c) Eating disturbances—most commonly loss of appetite; less often, overeating.

d) Sleep disturbances—either insomnia or excessive sleeping. Excessive sleeping more often is seen in the adolescent than in the depressed adult.

e) Excessive use of drugs or alcohol or promiscuous sexual activity in an effort to ward off or mask the depression. This represents a form of self-medication.

f) Loss of energy. In fact, the person may be so depressed that he/she does not have the energy to commit suicide. As he improves, he may make the attempt—usually within the first three months of beginning to improve. Most suicide attempters are not psychotic, but are terribly unhappy people. About 80 percent are depressed and most of the remainder suffer from impulse or personality disorders.

4) The final warning sign. The final sign is prior suicide attempts. All attempts should be regarded as a cry for help and always should be taken seriously. Of suicide completers, 80 percent had one or more prior attempts and 10 percent of suicide attempters later go on to successfully complete the act.

WAYS TO HELP THE POTENTIALLY SUICIDAL ADOLESCENT

1) Be alert to the possibility of depression and suicide in adolescents, particularly in youngsters where you note marked changes in functioning or behavior or in youngsters who become accident prone. A really serious accident, in fact, may have been a failed suicide attempt. At the same time, do not overreact. Most adolescents who exhibit behavorial changes are not suicidal although the majority of adolescents who do attempt suicide have given warning signs and exhibited behavior changes.

2) Take a thorough psychosocial, family, and medical history, looking for the previously mentioned risk factors for depression, suicide, and loss.

3) It is important to ask directly about suicidal thoughts or attempts. Adolescents are much more prone to make impulsive suicide attempts without manifesting prominent signs of depression than adults. By inquiring about suicide, you are not suggesting something the adolescent has not thought of already. The suicidal youngster usually will be relieved that someone is concerned enough to pick up sometimes hidden clues and muffled cries for help. Suicidal thoughts rarely are volunteered unless specifically asked about and almost always are honestly answered.

4) If they do not admit to suicidal thoughts, it then becomes crucial to assess the urgency of the situation. Additional questions to ask are: How long have they had such feelings? Why and how they might want to end their lives? Do they have a definite plan and access to the resources needed to carry out their plan? Are they depressed and what is the extent of their depression?

5) All suicidal threats and attempts should be taken seriously. Do not get too concerned about whether the adolescent is manipulating you or seeking attention. Any youngster who has to seek attention by threatening suicide is displaying a serious lack of resources and coping skills and certainly is in need of help. What form that help will take will vary with the individual, the family, and the available resources. For the youngster who is dealing with an acutely stressful situation, is not seriously depressed and has only vague wishes to die, it may be best just to listen, to express interest and concern and a willingness to be available, and to help. Seeing the patient two or three times may be sufficient either to resolve the crisis or to decide with him to involve his parents and arrange for psychiatric consultation and ongoing therapy. On the other hand, if the patient indicates a definite plan to commit suicide with access to lethal means such as firearms in the house and a strong feeling that life is not worth living, immediate intervention becomes imperative! You should notify the family and arrange for psychiatric consultation to consider immediate hospitalization or intensive outpatient treatment.

6) If you will be counseling the potentially suicidal adolescent beyond the initial evaluation, you must be available to that adolescent. You must tolerate a period, sometimes prolonged, of being tested, used, and manipulated. Many of these youngsters anticipate and provoke rejection. They feel very lonely and isolated, even when they appear to be surrounded by friends. They fear becoming attached to another because of the risk of another painful loss, so it may take a very long time before they believe that you really care whether they live or die. Know your own limits! Not everyone is capable of working with suicidal or depressed adolescents and even those who enjoy the challenge probably should not take on too many such patients at any one time.

Nonpsychiatrists and psychiatrists who are not experienced with adolescents should consult an experienced psychiatrist about every seriously suicidal adolescent to assess the need for hospitalization and medication and to determine the type and intensity of treatment indicated.

The myth that people who talk about suicide do not do it, is false. The majority who commit suicide have given definite warning signs.

7) In working with suicidal adolescents, it is important to consistently communicate a sense of hopefulness, a belief that they have the ability—perhaps with your help—to find better ways to cope and to get satisfaction from their lives. This does not mean taking over and telling them how to live; with their agreement, it may be useful to explore alternatives. Suicidal adolescents often have very poor problem solving and coping skills. They do not perceive the variety of options available other than suicide. It is important not to lecture the adolescent on how much better off he is than others or on the sinfulness of suicide. The professional with a judgmental or ridiculing attitude is likely to increase the adolescent's sense of guilt and feelings of worthlessness and to confirm his belief that no one can understand and help.

8) In the event of acute suicidal risk warranting immediate hospitalization, the family should be involved in the treatment process. In other circumstances, a joint decision with the adolescent is essential to begin working towards alleviating some of the stresses.

9) Antidepressants are less successful for suicidal adolescents than for adults, partly because of noncompliance. Medication may be useful, however, where there are clear-cut symptoms of depression and a family history of effective disorder. The medication treats the symptoms of depression—sleep, appetite disturbances, and depressed mood—but not the associated social, interpersonal, and cognitive difficulties. Many adolescents react negatively to medication, which they see as a form of mind control. Being preoccupied with their bodies and how they function, adolescents tend to tolerate side effects poorly, and prefer to stop the medication instead.[21] They may hoard medication to use later as an overdose—a risk with any potentially suicidal adolescent—or they impulsively may misuse the medication with alcohol or other drugs. Prescribing small amounts, monitoring blood levels, and having parents hold the medication may be necessary.

10) The general medical community should be familiar with the local professional mental health resources (private psychiatrists, community mental health centers, psychologists, and social workers) and with other counseling professionals such as clergymen. They are not all competent and experienced in working with depressed and suicidal youngsters.

11) Finally, a suicidal adolescent who is referred elsewhere may not cooperate; compliance with such referrals is poor. An aggressive outreach approach often is needed—to actually schedule the appointment and make sure that it was kept. Remember, many of these adolescents don't believe anyone cares or can help them anyway!

INTERVENTIONS WITH A YOUNGSTER WHO HAS ACTUALLY ATTEMPTED SUICIDE

Every suicide attempt should be taken seriously: The adolescent should be brought to a hospital emergency room or to a psychiatrist experienced with adolescents for psychiatric evaluation and hospitalization should be considered seriously for every youngster who attempts suicide.[18, 22] Even when the suicide attempt is a gesture, such as ingestion of less than 20 pills in the context of a family quarrel, brief hospitalization can help. This is true even when the adolescent is remorseful or denies that he really meant to die or when the family is angry, denies the seriousness of the attempt, and is insistent on taking the adolescent home. Hospitalization offers immediate relief from the pressures that precipitated the suicide attempt or gesture and may relieve anxiety and provide a supportive, protective, and caring setting. Hospitalization also gives the physician an opportunity to assess the strengths and pathology in the youngster and family system. It makes a statement to the parents, who may be defending themselves for their own guilt through massive denial, about the meaning of what has happened. Hospitalization makes the statement that you, the physician, take the suicide attempt seriously. It is a sign of significant problems in the family and in the adolescent and you could make an explicit statement to both the patient and parents to that effect. Ongoing psychiatric consultation will be available immediately to help them figure out what is the nature of the difficulty. Sometimes, hospitalization may be counterproductive, may increase the patient's sense of helplessness and inadequacy, and may lull the physician into thinking that "something" is being done.[7]

A decision may be made not to hospitalize when a qualified psychiatrist has assessed the situation and is willing to assume responsibility for outpatient treatment. The treating physician of an adolescent in ongoing therapy may make a judgment not to hospitalize, based on an assessment of the adolescent, the nature of the suicide attempt, the strength of the relationship with the psychiatrist, and the family situation.

ASSESSMENT

As part of your determination of need for hospitalization, whether you recommend hospitalization or not, you must assess three factors in the evaluation of a suicide attempt—intent, lethality, and danger of recurrence.[23]

Intent refers to what the adolescent intended to happen—to die, to punish others, or to get his/her way. Clues as to intent can be obtained from the timing, location, and proximity to others at the time of the suicide attempt, as well as from the patient directly. Lethality refers to the dangerousness of the method selected. Firearms, jumping from high places, hanging, and running into traffic are considered highly lethal, while wrist cutting and ingestion of substances are of low lethality. In assessing the danger of recurrence consider such factors as the depth of the depression —the number and severity of symptoms and the length of the depressive episode. Other factors include suicide or suicide attempts of significant other persons, anniversaries of traumatic events such as deaths or divorces, the presence of continued stressful situations, the patient's inner resources, and his available external resources or support systems. The latter includes the strength of the relationship with the psychiatrist.

About 80 percent of suicide attempts are the result of depression. Other youngsters are struggling with poorly controlled rage and impulse disorders and use suicide threats and attempts in an effort to manipulate the enviroment into doing what they want. These youngsters often are quite difficult to treat and tend to come from very deprived and disturbed backgrounds in which they have endured losses, rejections, and failures. Brief hospitalizations, often repeated hospitalizations, may be indicated as part of an overall treatment plan of individual therapy, family therapy, and placement outside the home.

Biological correlates of depression and suicide in adolescents are inconclusive at present. Further research needs to be done on the usefulness of dexamethasone suppression tests or other neurobiological evaluations. One should keep in mind the increased risk of suicidal behavior among youngsters with abnormal EEGS, with learning disabilities, and with chronic and acute mental illness.

It is important—if at all feasible—that the adolescent not be discharged into the same stressful circumstances that contributed to the suicide attempt. Whenever possible the parents should be involved during the hospitalization, should try to understand their contribution to the problem, or, at least, should understand their child's needs and concerns. Other milieu changes may be helpful such as a change in school, classes, and teachers, or through additional recreational or vocational activities. Prior to discharge, definite arrangements should be made for ongoing treatment of the adolescent and, possibly, the family as well. If no changes have occurred in the stresses at home or in the adolescent's vulnerability to them, placement outside the home should be strongly considered, recommended, and arranged for this life-threatening disorder.[24]

Finally, professionals involved in the care of adolescents can serve as advocates for the needs of adolescents in order to reduce the risk of suicide. Although we still have a lot to learn about what preventive and therapeutic efforts work with potentially suicidal adolescents, we cannot await the findings of rigorous research studies. Legislative and community efforts should be supported to develop programs of education and intervention that may reduce the sense of isolation, hopelessness, helplessness, and alienation that lead to suicide.

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COMPUTERIZATION OF THE MEDICAL OFFICE

PAUL J. HIRSCH, M.D., STUART A. HIRSCH, M.D., LYNN REEDMAN, C.M.A., ANDREW WEISS, M.D., BRIDGEWATER*

Increasing numbers of medical offices use computers for many reasons: to be up to date; to manage increasingly complex information; to follow changing regulations; and to take advantage of the decreasing cost of computers. Most computerized medical offices do billing only or tasks directly related to billing. This ignores the potential and promise of the computer. Advancing technology and lower costs have made fully integrated multi-tasking computer systems, which are capable of comprehensive information management, economically feasible. With the current state of the art, simple billing systems are virtually obsolete the moment they are purchased.

INTEGRATED SYSTEMS

An integrated comprehensive computer program is likely to provide the physician with many competitive advantages in today's difficult medical environment. These advantages include the ability to understand more fully and to obtain information about the practice; to provide coding and other information for insurance forms and for the government; and to retrieve and manipulate the information already available in the practice, to direct the growth of that practice, and to market the practice, if necessary.

THE SYSTEM

The system should be capable of supporting multiple terminals, multiple printers, and other devices. More than one terminal is desirable, so several people can enter or retrieve information simultaneously and it is probable that a busy practice will want more than one printer. A letter-quality printer is desirable for reports that will be leaving the office; a high-speed dot matrix printer is useful for billing. A very busy office may want to use a third printer, solely to produce insurance forms, while the patient still is in the office.

The system should support a modem, a device that allows the computer system to communicate with other computer systems. This will permit the office to access public data bases. The modem also will allow the vendor to access the program for modification, or to handle problems. Indeed, most difficulties that are encountered with a program can be corrected by the vendor's programmer over this telephone line.

STARTING UP

The first step in computerization of the medical office is for the physician to begin investigation of various programs. It is the program—the software—that is key to the use of the computer. The hardware—the computer—is of secondary importance. Most often, after identifying the most suitable program, the office will purchase that computer to run the program. It is important to obtain information about computer pro-

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*Dr. Paul Hirsch is Chief of Orthopaedic Surgery, Somerset Medical Center and Clinical Associate Professor, Orthopaedic Surgery, UMDNJ-New Jersey Medical School. Dr. Stuart Hirsch is Attending, Orthopaedic Surgery, Somerset Medical Center. Ms. Reedman is Office Administrator and Computer Manager for Hirsch and Hirsch Orthopaedic Practice. Dr. Weiss is Professor and Chairman, Department of Orthopaedic Surgery, UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. Hirsch, Green Knoll Professional Park, 720 U.S. Highway 202-206, Bridgewater, NJ 08807.

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grams from as many sources as possible; most important is to speak with colleagues who are utilizing programs, as well as members of their staff. Observe the program in action; it will do only what you see it do, unless the program is modified.

The owner of a computer system is dependent upon the computer vendor for support, service, modifications, and enhancements. The company's interest in providing these, and ability to provide these, can best be determined by questioning their customers; this is a crucial step in determining the proper program. A vendor should be willing to make modifications in the program, so that the program can adapt to the office, rather than making the office adapt fully to the program. Enhancements, based upon advances in computer technology and improvements in programming, should be available at least annually; two or three times a year would be better. The vendor also must be willing to alter the programs, in accordance with changes in state, federal, and insurance regulations affecting medical practice.

Once the decision to purchase a computer has been made, and the vendor selected, careful attention must be paid to the contract. This contract always should be reviewed by an attorney.

Cost, of course, is a consideration. Nevertheless, the program that sounds quite expensive to the physician, may not be. The total cost should be considered a five-year investment. For most medical offices, it makes business sense to borrow money for the system, with a five-year repayment; or to arrange a five-year lease-purchase. On this basis, the monthly cost for the system and the service contract, for even "expensive" medical office systems, should be well within the budget of most medical practices. Indeed, it is probable that enhanced billing techniques and improved cash flow will pay for the system quite quickly.

When starting up, a computer manager should be designated. This should be a person within the office who cares about the process of computerization and is committed to it, understands the information generated by the computer and the retrieval of this information, and is responsible for presenting that information to the physician. In most instances, a physician will not have the time to spend on this, nor would it be economically appropriate for a physician to spend the required amount of time on this process.

Support from the vendor also is essential in starting up. The vendor must provide education and training for key employees. The vendor should provide one or more people on-site, immediately following the installation, for a minimum of one week; two weeks or more would be preferable. In part, these representatives will complete the education of the physician's staff. Equally important, their presence will give the staff the confidence that they need to use the system and to make it work. It is important to initiate the process slowly and gradually. There will be many phases to the integrated medical office computer program. It is not necessary to begin all aspects at once. It is best to begin with some segments and gradually introduce the remaining segments of the program, into the office procedures, over a period of months.

We have divided the many functions of an integrated system into three basic applications: business applications, medical applications, and appointment scheduling. It is important to note that these interrelate closely. Indeed, the fact that they do interrelate in actual practice makes it essential that they interrelate within the computer program also.

BUSINESS APPLICATIONS

For most offices, the business applications, particularly patient billing, must and will pay for the system. The first business application, however, and the first step when a patient enters the office, is registration. This is the process by which the patient's name and other important information is entered into the computer. With some systems, all of this data is entered as the patient is registered at the desk. In other systems, the data are entered at the end of the day. Information must include such basic data as birthdate, address, telephone number, and insurance information. The computer should assign an account number. In many practices, it may be important that the system have the capability to assign more than one account number for the patient, for different problems. This may become necessary when different events or illnesses are covered by different insurance companies. A good system will have no difficulty in tracking and maintaining separate accounts for the same patient.

This basic information should allow the computer to produce a "super bill" for the patient. Most offices now are using this super bill format to communicate services performed to the receptionist, and then for recording in billing. The patient should leave the office with a completed super-bill insurance form. The computer system also should have the ability to complete other insurance forms, such as those required under New Jersey no-fault laws.

The complete computer system also will include the CPT-4 and ICD-9 coding systems. All diagnoses and procedures should be coded automatically. At the present time, providing such code numbers on insurance forms, provides a more rapid response time from the insurance companies; and, it seems likely that full diagnostic and procedural coding will be required by all third-party carriers in the near future. Furthermore, coding makes it simple to track diagnoses and procedures for business or clinical purposes.

Even the most basic medical office computer systems have a good billing system. For some of these programs, billing indeed will be the primary or only function performed. An integrated system may or may not perform this in a better fashion for a given practice; but, it should integrate the information and allow ease of retrieval of practice information. Certainly, the billing process should be more efficient with a computer, save time, and produce better cash flow. A good system will initiate the billing process when "told" to do so by the computer manager. Many programs now will produce the bills, already within prestamped and sealed envelopes, and ready for mailing. In association with this, management reports on the accounts re-

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ceivable, are essential. This should provide breakdown into accounts of 30, 60, 90, and 120 days; and a careful analysis of the monies owed by insurance companies.

Management reports provide an analysis of referral sources and a breakdown of patients by zip code, age, or diagnosis. The reports similarly should provide average charges for each coded item, and the total monthly and year-to-date charges for these items.

The billing system should allow for tracking of in-hospital patients. The name of every patient seen in the hospital should be entered into the system each day. Charges should be entered automatically, but not billed until the patient leaves the hospital. This same process should produce a daily list of all hospital inpatients, whether on service or consultations, so that the physician has a current list of these each day.

All basic office systems should allow the production of mailing lists and labels. This usually will be a product of the registration system. Although many offices may not use a mailing list at the current time, increased competition and the need for marketing of medical practices may require this in the future. It would be useful for such functions as the mailing of a patient newsletter.

Other business applications which might be helpful to some offices include a system for management of accounts payable, inventory control, and a spread sheet program for further practice evaluation and projection analyses. Although the practice may not require all of these items at once, the capability must be there, if obsolescence is to be avoided.

MEDICAL APPLICATIONS

Word processing is essential for any office that produces long notes or reports. Integration of word processing into the computer system will have many advantages. A good word processing system should be easy to use, and should include a spelling checker, with the ability to add an unlimited number of words to the spelling checker. Some programs today will automatically enter any word that is not already included after first "asking" the transcriber to check the spelling. If this is part of the program, then the medical terminology peculiar to any specific practice is likely to be fully entered within a few weeks, without any effort on the part of the transcriber. A high-quality word processing system will reduce the time required to produce medical records, will improve the appearance of the records and of the reports, and will improve the morale of the transcriber.

In addition to the word processing capability, an integrated medical record program will store records and allow retrieval by diagnosis, procedure, or medication. It will assist with quality assurance and with patient management. The integrated medical records program should allow for a data base search, and for providing computerized summaries of the clinical practice.

A medical application provided by some of the better programs will allow direct access to drug information from the *United States Pharmacopoeia*. This information is quite readable; and it may be appropriate to provide printouts of this information for patients.

In addition, a drug interactions index is extremely helpful. When faced with prescribing a new medication for a patient already taking other medications, the physician can enter each of these into the computer and receive immediate information regarding any potential known interactions.

The system should allow the physician access to the public data bases that provide easy retrieval of extraordinary amounts of information.

A comprehensive program should allow the tracking of laboratory data, so that this information is not ignored inadvertently. This is particularly important in our litigious society. When laboratory tests are ordered and recorded as part of the medical record, or independently, they should be placed on a list which is produced regularly, until the information is received.

APPOINTMENT SCHEDULING

Appointment schedulers have been most difficult for computer programs to provide. Many offices have found these to be difficult and tedious, requiring more time for entry than their previous appointment system, and therefore, have preferred to avoid computerized appointment systems. Nevertheless, good appointment systems are available and provide important advantages for the practice.

The appointment system must be adaptable to an individual practice. The program should allow each practice to select the appropriate time intervals for each appointment and the numbers of patients to be seen within each time interval. The system should be capable of searching for an opening, in any one of several possible fashions: first available appointment; first available appointment for a specific physician within the practice; first available appointment on a Monday; first available appointment after 3:00 P.M.; and so on. It should provide this information with a minimum of effort on the part of the receptionist and should do so rapidly. If not, it simply will not work within a busy practice.

The appointment scheduling system should produce at least three daily patient lists for each office. The first, an alphabetized list, will make the pulling of records for the following day much easier. The second, the daily schedule, should be reproduced and kept at several locations in the office, to monitor patient flow. The third, a listing of the subsequent day's patients with telephone numbers, will help with reminder phone calls.

The appointment system also can be utilized to automatically produce reminder postcards for mailing several days prior to a scheduled appointment. The system should produce recall notices for patients who have missed appointments; it should provide a list of those patients for the physician and office manager.

The appointment system also can be utilized to produce patient recalls for routine re-evaluations. Finally, some offices have found it useful to monitor the daily appointment list, as an additional accounting check on the day's billing.

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CASE REPORT: SCHISTOSOMA HEPATIC CIRRHOSIS AND BLEEDING ESOPHAGEAL VARICES

DONALD ROTHMAN, M.D. RED BANK*

A native of Puerto Rico, residing in New Jersey, developed cirrhosis with bleeding esophageal varices due to* Schistosoma mansoni*. She was treated surgically; the result was satisfactory. Physicians should be aware of such possibilities from patients who immigrate to New Jersey.

Liver cirrhosis due to the parasitic trematode worm *Schistosoma mansoni* is distinctly uncommon in Holmdel, as well as the United States and Canada. Few reports of bleeding varices secondary to mansonic portal hypertension in North America exist.[1] Because of increased immigration of people harboring schistosomiasis, its fascinating pathogenesis and the clinical differences from ethanol-induced cirrhosis, it appears worthwhile to present a case.

CASE REPORT

A 47-year-old housewife came to the Bayshore Community Hospital emergency room in November 1985 vomiting mouthfuls of blood clots. After three units of blood, pitressin, Carafate®, and Tagamet®, her condition stabilized. She was born in the Utuado-Lares area of Puerto Rico (near Ponce). She remembered, as a child, she contracted Bilharzia from swimming in contaminated water where her mother did the wash. She recalls a swimmer's rash and weight loss with 40 shots as treatment. Her brother, who also contracted Bilharzia, received over 100 injections. She lived in the United States since age 19. In 1978, the patient had a cholecystectomy for acute and chronic cholecystitis and cholelithiasis. At that time, she had nonbleeding esophageal varices demonstrated by upper gastrointestinal x-rays. The spleen size was normal. No eggs were found in the stool or upon rectal biopsy. Grossly, the liver appeared congested and streaky and had soft nodular proliferation. The liver biopsy showed mansonic eggs and fibrosis (Figure 1).

Between 1978 and 1985, although there were admissions for varicose vein surgery, a hysterectomy, and treatment for urinary infections, the patient essentially was well. At the time of hematemesis, she and her family convincingly denied alcoholism.

Serological testing in 1978 revealed an alkaline phosphatase of 262 U/L (normal 40-150); SGOT 70 U/L (0-40); LDH 177 U/L (76-220); SGPT 89 U/L (0-53); albumin 3.4 g/dl (3.0-4.7); and normal prothrombin time. The comparative values in 1985 were alkaline phosphatase 190, SGOT 65, LDH 267, SGPT 38, albumin 2.4, and prothrombin time 12.1 seconds over control 13.2. The platelet count was 154,000 and the serum ammonia level 32 UMOL/L (normal 11 to 35).

On the November 1985 admission, esophagoscopy revealed bleeding varices. A liver and spleen scan showed a normal-sized liver and no splenic uptake (Figure 2). The venous phase of a superior mesenteric arteriogram indicated a large portal vein and large superior mesenteric vein. There were gastric and esophageal varices. No splenic vein was seen.

After discussion and preparation, the patient underwent an interposition H superior mesenteric vein-in-

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*Correspondence may be addressed to Dr. Rothman, 565 Highway 35, Red Bank, NJ 07701.

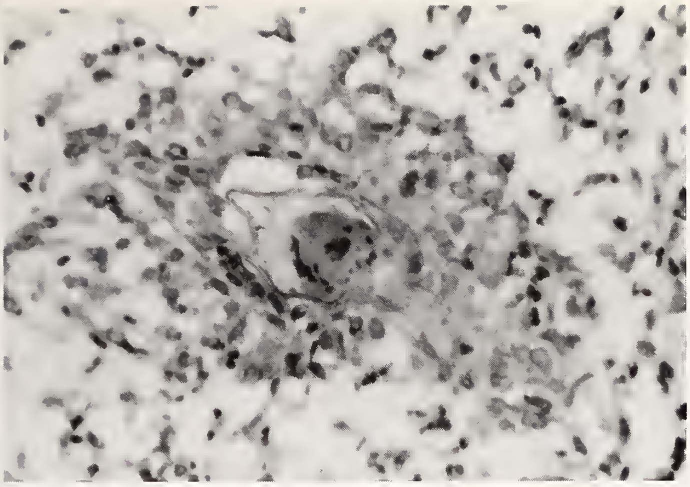

Figure 1—*Schistosoma mansoni* eggs in liver with granulomatous reaction.

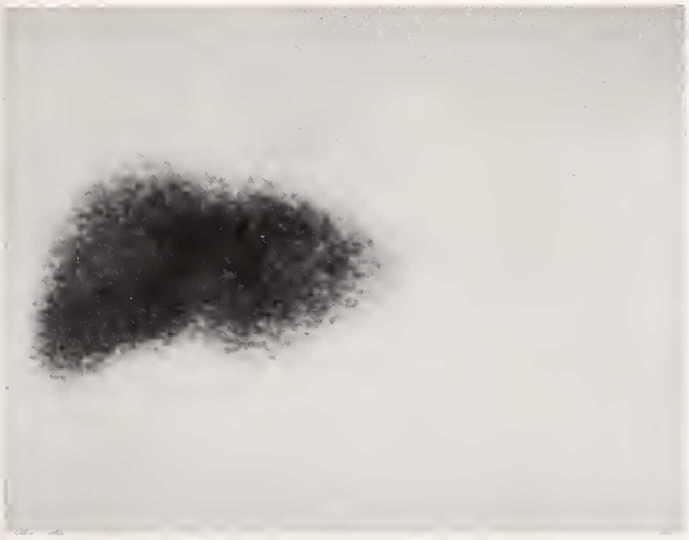

Figure 2—Liver spleen scan with no splenic uptake.

ferior vena caval shunt using an 18 mm Dacron graft. The opening portal pressure was 32 cm of water and closing was 17 cm. The spleen was very small and firm. Dense adhesions containing dilated venous collaterals precluded a biopsy of the very sclerotic liver. The postoperative course was satisfactory. A low platelet count was worrisome, unexplained, but temporary and not clinically significant. A higher ammonia level (80) was noted, but no obvious encephalopathy was detected. Repeat esophagoscopy showed collapsed varices. The patient was discharged on postoperative day 11 and was in satisfactory condition when re-examined postoperatively.

DISCUSSION

Although individuals will not contact schistosomiasis in Holmdel, physicians in New Jersey treating natives of Puerto Rico, Phillippines, Brazil, Egypt, the Orient, and their neighboring countries must be aware of the sequelae of parasitism even decades after the infestation. Indigenous snail in these countries release cercariae (worm larvae) which penetrate the skin of humans bathing in contaminated waters. The parasite passes through lymph and blood through the right heart and finally into the portal venous system. Mature worms migrate in a retrograde fashion into intestinal portal venules, deposit eggs which pass into the stool (transmucosally) and then into the snail habitat completing the cycle. Other ova embolize into liver portal branches causing antigenic reactions, presinusoidal fibrosis and portal hypertension.[1-3]

Parasitic cirrhosis differs from ethanolic cirrhosis. The liver cell is relatively spared in the parasitic type and the patient probably represents a better operative risk. Tributaries of the portal system may be thrombosed by the parasites and influence the treatment. Active disease requires continued treatment of parasitism since portosystemic shunts may embolize ova into the lung and cause pulmonary fibrosis. The incidence of hepatic encephalopathy is less preoperatively in schistosomiasis, but may be high after shunting surgery.

Worldwide, the methods of portal decompression vary by location, the surgeons' choice, and available health resources and include splenectomy and gastroesophageal decongestion, splenectomy alone, and various shunts with or without splenectomy. Because of an estimated risk of 10 to 15 percent encephalopathy, the distal splenorenal may be the best type of shunt.

In 11 patients operated in the United States for schistosomiasis the surgical procedures were: one splenectomy alone, five splenoreal shunts with and without splenectomy, four portocaval shunts, and one mesocaval interposition shunt.[1]

Our patient had no preoperative encephalopathy. The liver functions and albumin were abnormal. The small spleen and nonvisualized splenic vein were not well explained; perhaps this was due to continued parasitic involvement. The mesocaval interposition H shunt was chosen because of the poor splenic vein, extensive adhesions in the right upper quadrant due to prior cholecystectomy, large superior mesenteric vein on venography, and operator preference.

SUMMARY

Hepatic cirrhosis and its sequelae in the United States is not always due to alcoholism. Foreign-born patients must be evaluated for parasitism by *Schistosoma mansoni* since the clinical manifestation and therapies require a tailored approach.

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ADVANCES IN CANCER: HORMONE RECEPTORS AND THEIR ROLE IN THE CLINICAL MANAGEMENT OF CANCER

MARVIN A. KIRSCHNER, M.D., NEWARK*

Estrogen and progesterone receptor measurements in tumor samples from women with breast cancer have enabled clinicians to determine hormone responsiveness and are useful therapeutic and prognostic guides. Receptor measurements may prove useful in Ca of endometrium, prostate, and other neoplasms.

Hormone responsive cancers represent an important group of tumors which the physician, and particularly the oncologist, deals with on a daily basis. Table 1 lists cancers which may be hormone responsive and their potentially stimulating hormones. These neoplasms are important in clinical oncology because 1) the cancers listed are quite common (it has been estimated that 50 percent of cancers in the United States are hormone responsive), and 2) the growth of these cancers can be influenced specifically by altering the hormonal environment of the host. Thus, the clinical management of patients with hormone responsive cancers holds the promise that specific therapies might be used in their management above and beyond the usual tumoricidal or cell cycle agents used to treat other solid tumors.

The cancers listed in Table 1 have in common the fact that the tissues of origin represent target organs for the action of specific stimulating hormones. Breast, endometrium, prostate, and thyroid are classic hormonal target tissues, whereas the relationship of glucocorticoids to growth of lymphoid tissues is less clear, as is the effect of androgens on renal tissue. The major problem facing the clinician in dealing with these cancers, however, is the ability to determine whether a particular patient has a hormone responsive neoplasm. If such information could be ascertained on an individual case basis, then the trial-and-error use of hormonal manipulations well might be obviated. It was a major scientific advance when hormone receptor measurements were adapted to clinical oncology in a specific attempt to determine hormone responsiveness of the particular neoplasm.

HORMONAL RECEPTORS

The most widely studied example of hormonal stimulation of target organs classically has been that of estrogenic stimulation of uterine tissue. Earlier studies by Allen and Doisy established the profound stimulatory effect of estrogens on the growth of uterine tissues in laboratory animals.[1] Similarly, treatment of the estrogen-stimulated uterus by corpus luteum extract subsequently identified as progesterone resulted in prompt, striking changes to the well-known "secretory pattern."[1,2] Far less dramatic, but similar, changes were observed when breast tissue was exposed to estrogens and then progesterone.

In the modern era of cell biology, Jensen attempted to study the events whereby estrogens stimulate target tissues by using radiotracer methods. After successfully synthesizing estrogens with extremely high radiotracer activity, this group demonstrated that estrogens

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*Dr. Kirschner is Director of Medicine, Newark Beth Israel Medical Center, and Professor of Medicine, UMDNJ. Correspondence may be addressed to Dr. Kirschner, Newark Beth Israel Medical Center, 201 Lyons Avenue, Newark, NJ 07112.

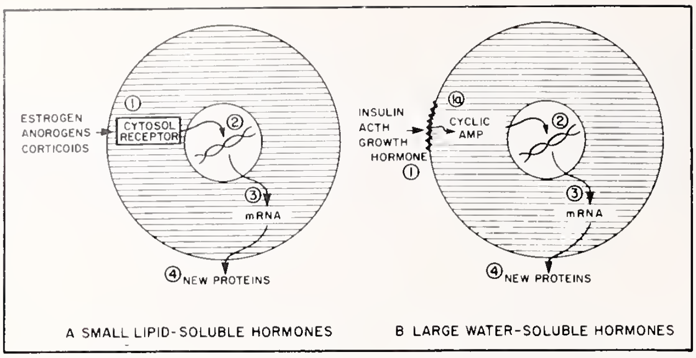

Figure 1—Schematic representation of estrogen stimulation of mammary cells. The first step in estrogen action is binding to a cytosol receptor protein which transports the estradiol to the nucleus. Subsequent to this process, new species of messenger-RNA are produced followed by protein synthesis which characterizes estrogen-stimulated hormone action.

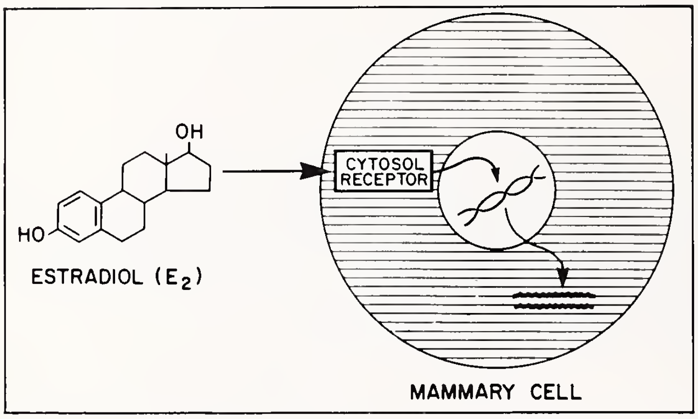

Figure 2—Schematic representation of hormonal stimulation of target tissues. In Panel A, small molecular weight hormones cross the cell membrane, and bind to a cytosol receptor which transports the hormone to the nucleus with subsequent formation of new species of messenger-RNA. The large molecular weight hormones (B) bind to a cell surface receptor with subsequent activation of an intracellular messenger system, cyclic AMP, which transmits hormonal message to the nucleus.

selectively were bound by the target tissues before being metabolically disposed of by liver and kidney.[3-5] Further studies demonstrated that estrogens were not only bound by target tissues, but were incorporated into the nucleus of the target cells prior to protein synthesis which characterized hormonal stimulation of that tissue.[4] In the mid 1960s, Toft,[6] Gorski,[7] and Jensen[4] reported the presence of specific estrogen binding proteins in the cytosol of estrogen target tissues, as demonstrated in Figure 1. These studies were followed by observations that androgen-responsive tissues have a similar testosterone binding protein. Studies by Wilson and colleagues demonstrated that testosterone bound to a specific androgen receptor protein was transported to the nucleus of the cell.[8] Secondary to this process, new species of messenger-RNA were generated and protein synthesis subsequently occurred. By contrast to the action of estrogens, androgens, and other lipid soluble small molecular weight hormones, the water soluble protein hormones, namely insulin, ACTH, and growth hormone, do not appear to enter the target cell, but rather bind to a hormone receptor on the cell surface.[9] Binding of the protein hormones to the cell surface of the target tissue activates an intracelluar messenger, thought to be cyclic AMP, which serves to transmit the hormonal message to the cell nucleus, with resultant new messenger-RNA and subsequent protein synthesis being turned on. Thus, there appear to be two mechanisms by which hormones stimulate target tissues, as demonstrated in Figure 2. Small lipid soluble hormones diffuse across the cell membrane and then bind to a specific cytosol protein called "receptor protein." This hormone-receptor complex results in the hormone being transported directly to the nucleus of the cell where it aligns with nucleoprotein to stimulate new messenger-RNA, and subsequently protein synthesis, which characterizes target organ stimulation. Thus, the cytosol receptor proteins in target tissues may be thought of as "taxi service" to receive the hormone when it enters the cell and transport it to the nucleus where it carries out its action directly. Large molecular weight water-soluble hormones bind to surface receptors on the cell membrane (Figure 2) which results in activation of a secondary intracellular messenger system to translate the hormonal message to the cell nucleus where a similar process of stimulation and new messenger-RNA is formed.[9]

ESTROGEN RECEPTORS

Approximately one-third of patients with metastatic breast cancer have hormone responsive tumors which respond favorably to additive or ablative forms of endocrine therapy, whereas in two-thirds of the patients the tumor appears to be unresponsive to hormonal manipulation and continues to grow despite these additive or ablative forms of endocrine therapy.[10] Considerable effort in the past was devoted to developing biochemical methods to identify those patients with "hormone-dependent" tumors. Earlier studies measuring estrogen blood levels and androgen/cortisol ratios (Bulbrook discriminant) suggested some relationships between hormonal production and tumor responsiveness to endocrine therapy; however, these data clearly could not be used in planning therapy for the individual patient.[11] With the discovery that normal breast tissue contains cytoplasmic estrogen-binding proteins (estrogen receptors), it was the early hope of many investigators that the determination of estrogen receptors in a given breast cancer sample could serve as the biochemical test to determine whether that particular neoplasm was hormone responsive.[12] Indeed, in vitro incubation of human breast cancer samples with radiotracer estrogens demonstrated the presence of specific estrogen cytosol receptors in approximately 60 percent of resected samples.[13,14]

The link between estrogen receptors and hormone responsiveness of breast cancer began with experiments in rat breast cancer models by McGuire and others, who readily observed the presence of estrogen receptors in those experimental tumors that responded favorably to hormonal manipulation.[15,16] By 1973, McGuire and Leung reported the presence of cytoplasmic estrogen receptors from human mammary cancer.[13,17,18] In July 1974, the Treatment Committee of the National Breast Cancer Task Force of the National Cancer Institute held a consensus conference in which more than a dozen groups from around the world, each using different methodologies for assessing estrogen receptors, reported their clinical findings. Despite the lack of standardization of methodology and differing ground rules for assessing clinical response to therapy, the results of this conference were quite striking.[14] First, it was observed that approximately 60 percent of resected tumor samples contained estrogen receptors. Second, there appeared to be a striking relationship between the presence of estrogen receptors within resected tumor samples and the subsequent favorable response to either additive or ablative hormonal therapy. As summarized by McGuire, 50 to 60 percent of patients whose tumor tissues contained estrogen receptors (ER+) exhibited a positive response to hormonal manipulation, whereas patients whose tumors contained no estrogen receptor (ER-) exhibited only a 4 to 5 percent response to these same hormonal manipulations.[14] These early studies demonstrated that the measurement of estrogen receptors in samples from human breast tissue would enable the treating physician to predict with twice the usual trial and error accuracy whether a particular patient would respond favorably to endocrine treatment. Equally important, however, were the ER- patients, since it became apparent that these patients had hormone-unresponsive tumors and that various endocrine ablations such as oophorectomy, adrenalectomy, and hypophysectomy clearly would not benefit the patient. Thus, ER- patients could be spared these surgical ablative procedures.

Over the past decade, the use of estrogen receptors for the clinical prediction of hormonal responsiveness has become widespread and clinically routine. This decade also has seen considerable refinement in techniques for determining estrogen receptors in cancerous breast tissue, from the initial difficult ultra-centrifugation methods to more reasonable competitive binding analyses, to even more simpler methods employing monoclonal antibodies raised against specific estrogen receptor proteins.[19] Most medical centers or regional commercial laboratories now can readily perform these assays which should be done routinely on surgically resected samples of breast cancer and/or metastases which are amenable to surgical biopsy. Such information can be used directly in designing adjuvant or other treatment protocols, or the information can be stored until such time that a treatment decision needs to be made.

Experience with the clinical use of estrogen receptors in the management of patients with human breast cancer has shown the following clinical features:

1. Tumors from postmenopausal patients generally contain higher ER values than premenopausal patients.[14] This is thought to be due to higher endogenous estrogen levels in premenopausal patients occupying receptor sites and, thus, making them unavailable for assay.

2. There is no correlation between histologic tumor type and the presence of estrogen receptors;[14] although there appears to be a correlation between histologic grade and presence of estrogen receptors.[10]

3. There was a negative correlation between the size of the primary tumor and the presence of estrogen receptors.[14]

4. There was no correlation between the clinical stage of the patient in the presence of estrogen receptors in the tumor.[14]

TABLE 1

Hormone-Responsive Cancers

Stimulating Hormone	
Breast	Estrogen and Progesterone
Endometrium	Estrogen and Progesterone
Prostate	Androgens
Thyroid	Thyroid-Stimulating Hormone
Less Clearcut Associations	
Lymphoma and Leukemia	Glucocorticoids
Renal Cell	Androgens
Melanoma	Estrogens

TABLE 2

Estrogen Receptors and Nodal Status Versus Prognosis after Primary Resection of Breast Cancer

Nodal Status	Estrogen Receptor Status	Disease-Free 2 Yrs.	Disease-Free 4 Yrs.	Overall 4-Year Survival
Negative	Negative	74%	70%	78%
1-3 nodes with tumor	Positive	84%	69%	87%
4 or more nodes with tumor	Positive	60%	52%	68%

5. There was no correlation between positive or negative axillary lymph nodes and the presence of estrogen receptors in the primary tumor.[14]

6. There was no correlation with the location of the tumor in the breast and presence of estrogen receptors.[14]

7. There was no correlation between disease-free interval and estrogen receptors.[14]

8. There appears to be a relationship between the absolute value for tumor ER and the response of that patient to endocrine therapy, although this relationship does not appear to be a linear one.

9. There appears to be a relationship between the magnitude of the ER value and the prognosis of the patient.

10. There was good correlation between the presence of estrogen receptors in the primary site and in areas of metastatic spread.[14]

Studies by McGuire and others have suggested that the magnitude of hormone receptors contained within breast cancer tissue (particularly estrogen receptors) might be useful in predicting the prognosis of the patient. McGuire has shown that patients with high levels of estrogen receptors have a better long-term prognosis than those with intermediate levels versus those with lower levels or no estrogen receptors present.[20] In fact, Osborne,[21] Rich,[22] and Clark[23] have suggested that the presence of estrogen receptors in resected tumor samples from a particular patient tends to offset the poor prognosis conveyed by the presence of axillary node metastases. Data suggest that measurement of estrogen receptors can direct the clinician toward a therapeutic regime and in assessing long-term prognoses.[24,24]

PROGESTERONE RECEPTORS IN BREAST CANCER

Observations from earlier workers of 1930 to 1950 indicated that progesterone affects target tissues only after they have been primed with estrogens. These same target tissues appear to be relatively un-

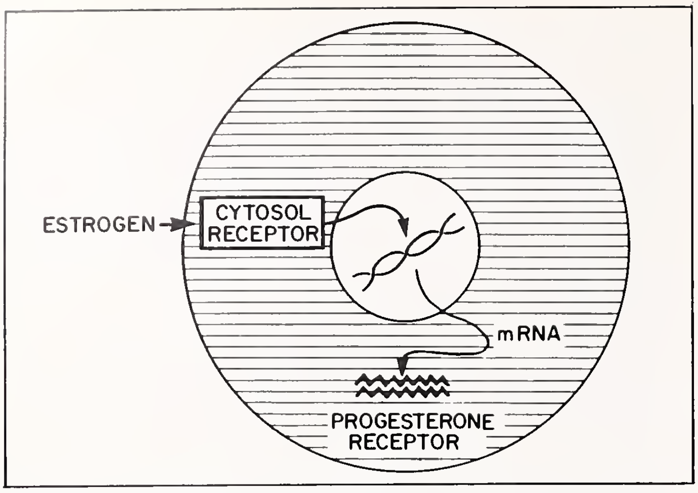

Figure 3—Schematic representation of estrogen stimulation of mammary cells. Estrogen binding and activation results in formation of new species of proteins. One of the proteins produced is progesterone receptor. Thus, measurement of estrogen receptors as well as progesterone receptors in breast cancer tissue tests the functional integrity of this entire hormone-mediated genome.

responsive to progesterone in the absence of prior estrogen stimulation. Since prior treatment of target tissues with estrogen seems to be so critical in the subsequent action of progesterone, Horwitz and McGuire reasoned that estrogenic stimulation of uterine and breast target tissues results in production of progesterone receptors, as one of its stimulatory effects, as demonstrated in Figure 3.[26,27] If this concept were true, then measurement of progesterone receptors in human breast cancer tissues would test the competency of the entire hormone-mediated genomic system, and potentially could improve upon the clinical value of estrogen receptor measurements. This hypothesis was borne out by clinical data of Horwitz and McGuire (summarized in Table 2) indicating that in patients whose breast cancer samples contained both estrogen and progesterone receptors, the responsiveness of that patient to hormonal manipulation was 80 to 85 percent in contrast to 30 percent responsiveness of patients whose tumors contained estrogen receptors only.[28,29] Further, it was most unusual to have a tumor sample contain progesterone receptors and not estrogen receptors, confirming the hypothesis that estrogen binding to its receptor results in progesterone receptor production. It seems apparent at this time that the combined determination of estrogen and progesterone receptors at the same time from resected breast cancer tissue or metastases yields the best information regarding clinical responsiveness of that particular tumor to hormonal manipulation.[27,29]

Further, recent data from several laboratories suggest that measurement of progesterone receptors in resected breast cancer tissues may yield improved information on a long-term prognosis for the particular patient. At this time it appears that measurement of progesterone receptors is the single best measurement, exceeding the usefulness of estrogen receptors in assessing prognosis for the breast cancer patient.[28]

ENDOMETRIAL CANCER

Carcinoma of the endometrium is the most common malignancy of the female genital tract. In the United States, the annual occurrence rate is 38,000 new cases per year resulting in 3,200 deaths per annum.[30] Although surgery and radiation therapy achieve an 80 to 90 percent cure rate in early stages of the disease, most of the deaths occur in advanced or metastatic endometrial carcinoma. While patients with recurrent or metastatic tumors require systemic therapy, no objective methods are available to predict whether hormonal or chemotherapy would be beneficial.

Normal endometrium is a target tissue for steroid hormones, notably estrogens and progesterone. Estradiol stimulates mitosis and increases progesterone receptor concentration in endometrial cells, while progesterone induces secretory differentiation of endometrium.

Since the original observation of Kelly and Baker that progesterone may be effective in the treatment of recurrent metastatic adenocarcinoma of the endometrium, progestins routinely have been used in this group of patients.[31] Kohorn, in an extensive review of the literature, showed that the overall response rate was approximately 30 percent in patients treated with progestins.[32] Responders were most likely to have recurrent, well-differentiated endometrial lesions. By contrast, a significant absence of response to hormonal manipulation was observed in poorly differentiated endometrial carcinoma. These observations have led to the general notion that measurements of progesterone receptors in tumor tissue from patients with endometrial carcinoma may yield the same kind of useful clinical data as to responsiveness of the patient to hormonal therapy, as observed in patients with breast cancer.[33] Indeed, recent reports indicate that estrogen and progesterone receptor concentrations correlate well with the degree of histologic differentiation. The presence of high progesterone receptor concentrations in well-differentiated endometrial carcinomas and low to unmeasurable levels of this receptor in poorly differentiated tumors has been widely reported.[34,35] It should be pointed out that the apparent instability of the progesterone receptors from endometrial cancer tissue has been a logistical and often limiting problem.[36,37] With improving methodology, it will be possible to measure both estrogen and progesterone receptors in a routine manner in women with endometrial cancer as is done in samples of human breast cancer. At that point, these measurements likely will assume the clinical importance of predicting responsiveness to therapy and patient prognosis.

PROSTATE CANCER

Prostatic cancer represents the second most common neoplasm and the second leading cause of cancer death in men in the United States, with 74,000 new cases per year resulting in 19,000 deaths yearly.[38] It has been estimated that only 12,000 new cases are potentially curable when first discovered; thus, in 80 percent of patients, the neoplasm has advanced beyond the locally resectable state at the time of initial diagnosis. In contrast to patients with cancer of the breast and endometrium, 80 percent of men with carcinoma of the prostate initially have hormone-dependent tumors and show objective regression following castration and/or estrogen administration. However, once the tumor has recurred, additional endocrine therapy has been of limited benefit.[39] More recently, medical adrenalectomy via aminoglutethimide and hydrocortisone has been reported to produce temporary favorable results in approximately 40 percent of patients with breakthrough disease.[40-42] Thus, this endocrine modality may be reasonable second-line therapy. Clinical trials are underway using LH-releasing hormone agonists in an attempt to produce a block of androgen action on prostatic tissue.[43-45]

Androgen receptor measurements in patients with prostatic cancer have not been as successful as in patients with carcinoma of the breast or endometrium. Several reasons for the lack of usefulness of this assay at the present time are as follows:

1. In many cases of prostatic cancer, there is inadequate tissue obtained for measurement of androgen receptors, since the diagnosis of prostatic cancer frequently is established from tissue chips obtained during transurethral resection.
2. Methodology for measurement of androgen receptor in prostatic tissue has been most difficult. Most tissue samples also include blood, which contains sex hormone-binding globulin, thus introducing an extraneous androgen-binding protein. Only recently has it been possible to overcome androgen binding to SHBG and other nonspecific tissue factors enabling the investigators to measure true androgen receptor protein contained with prostate tissue.[46]
3. To date, it appears that androgen receptor protein is ubiquitous in normal prostatic tissue as well as in cancerous prostate tissue. As a result, it is not possible to differentiate androgen receptor that is being associated with tumor versus normal surrounding prostatic tissue.
4. Studies show differing values for androgen receptor in different regions of prostatic cancer.[47]

It is apparent that, until now, the usefulness of androgen receptors as a guide to therapy of patients with prostatic cancer or as a guide to long-term prognosis has been nil. Recently, Murphy and colleagues have described the presence of estrogen receptors in prostate cancer tissue.[48] The potential usefulness of this finding remains to be explored.

GLUCOCORTICOID RECEPTORS

It has been known for a long time that glucocorticoids exert many physiological effects on lymphoid tissue. These widespread effects constitute the basis for the use of glucocorticoids in the treatment of a wide variety of immunological and inflammatory diseases, as well as in the treatment of lymphoid cell neoplasms.

Over the past ten years, several investigators have attempted to determine the presence of glucocorticoid receptors in a wide variety of leukemic and lymphoblastic malignancies.[49-52] The hope here was that the presence of glucocorticoid receptors might serve as a useful marker in predicting tumor responsiveness to glucocorticoids, as described above for the relationship of estrogen and progesterone receptors in breast and endometrial cancer. To date, no clear correlations have been established between the level of glucocorticoid receptors and the in vitro action of steroids in normal or neoplastic lymphoid tissue. There may be several explanations for this lack of clearcut correlation between hormonal receptors and tumor responsiveness, such as: 1) Marked heterogeneity of various cell types in these lympho-leukemic proliferative disorders; and 2) Optimal techniques for determining glucocorticoid receptors may not have been defined clearly as yet. Suggestions that the use of whole-cell assays for receptors determination with attempts to assay cells in a given phase of the cell cycle may provide useful predictive information on glucocorticoid responsiveness for the particular tumor.[53]

ANDROGEN RESPONSIVENESS

Earlier observations suggested that various renal enzyme systems were stimulated by androgens, leading to the possible speculation of a relationship between androgens and renal cell proliferation. Indeed, several preliminary studies seem to suggest that renal cell cancer in some cases can be stimulated by androgens. Attempts to investigate the presence of androgen receptors in renal cell carcinoma have led to the finding that androgen receptors are present, not only in the cytosol but in the nuclear fractions of isolated renal carcinoma cells. Cytosol androgen receptors were detected in approximately 50 percent and nuclear androgen receptors in 57 percent of tumors, reported by Concolino et al.[54] The authors suggest that examination of androgen receptors in patients with renal cell carcinoma may help to define the hormone-dependent human renal cell cancer and also may be useful in selecting patients to be treated with antiandrogens such as medroxy-progesterone acetate.

MALIGNANT MELANOMA

Observations suggest a hormonal relationship with this neoplasm. Women generally have a better prognosis than men. This neoplasm usually makes it appearance at puberty and is exacerbated during pregnancy. These observations suggest a relationship between melanoma and estrogens.[55] Several groups observed increased plasma levels of HCG_B in a high percentage of patients with melanoma versus other malignancies.[56,57] Low levels of estrogen receptors in resected tumor samples from patients with malignant melanoma were reported.[55,58,59]

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after a major nationwide trial...

...we had
to find
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right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1]*

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

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Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

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INDERAL® LA

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Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

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The one you know best keeps looking better

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NEW LOW DOSE

INDERAL LA 60 mg

(PROPRANOLOL HCl) LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation Clinical improvement may be temporary

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

ONCE-DAILY

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LONG ACTING CAPSULES

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IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible)

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol However, such patients may be subject to protracted severe hypotension Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead return of increased intraocular pressure

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe h disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS Patients receiving catecholamine-depleting drugs such as re pine should be closely observed if INDERAL is administered The added catecholam blocking action may produce an excessive reduction of resting sympathetic nervous act which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthost hypotension.

Caution should be exercised when patients receiving a beta blocker are administere calcium-channel-blocking drug, especially intravenous verapamil, for both agents may press myocardial contractility or atrioventricular conduction. On rare occasions, the conc tant intravenous use of a beta blocker and verapamil has resulted in serious adverse reacti especially in patients with severe cardiomyopathy, congestive heart failure or recent myo dial infarction

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol

Phenytoin, *phenobarbitone*, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased pla levels of both drugs

Antipyrine and *lidocaine* have reduced clearance when used concomitantly propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomita with propranolol

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studie animals have been conducted to evaluate toxic effects and carcinogenic potential In month studies in both rats and mice, employing doses up to 150 mg/kg/day, there wa evidence of significant drug-induced toxicity There were no drug-related tumorigenic eff at any of the dosage levels. Reproductive studies in animals did not show any impairme fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxi animal studies at doses about 10 times greater than the maximum recommended human d

There are no adequate and well-controlled studies in pregnant women. INDERAL shoul used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exerc when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have ra required the withdrawal of therapy

Cardiovascular. Bradycardia; congestive heart failure; intensification of AV block; hypo sion; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of Raynaud type

Central Nervous System: Light-headedness; mental depression manifested by insom lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; vi disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterize disorientation for time and place, short-t memory loss, emotional lability, slig clouded sensorium, and decreased pe mance on neuropsychometrics. For imme formulations, fatigue, lethargy, and v dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epi tric distress, abdominal cramping, diarr constipation, mesenteric arterial thromb ischemic colitis.

Allergic: Pharyngitis and agranulocyt erythematous rash, fever combined with ing and sore throat, laryngospasm and res tory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purp

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has b reported

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impote and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions invol the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride sustained-release capsule for administration once daily If patients are switched from INDE Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therap effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitut INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interv

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 INDERAL LA once daily, whether used alone or added to a diuretic. The dosage ma increased to 120 mg once daily or higher until adequate blood-pressure control is achie The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of mg may be required The time needed for full hypertensive response to a given dosag variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERA once daily, dosage should be gradually increased at three- to seven-day intervals until opt response is obtained. Although individual patients may respond at any dosage level average optimal dosage appears to be 160 mg once daily In angina pectoris, the value safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks WARNINGS).

MIGRAINE—*Dosage must be individualized* The initial oral dose is 80 mg INDERA once daily The usual effective dose range is 160-240 mg once daily. The dosage ma increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy sh be discontinued. It may be advisable to withdraw the drug gradually over a period of se weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are t limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laborator

2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxpren atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

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REPORT OF THE NOMINATING COMMITTEE

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1st Vice-President	1 year	Paul J. Hirsch, M.D., Somerset
2nd Vice-President	1 year	Douglas M. Costabile, M.D., Union
Treasurer	*2 years	†Joseph N. Micale, M.D., Hudson
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1st District	3 years	R. Gregory Sachs, M.D., Union
2nd District	3 years	Carl Restivo, Jr., M.D., Hudson
2nd District	3 years	Gerald H. Rozan, M.D., Passaic
3rd District	3 years	Michael M. Heeg, M.D., Mercer
3rd District	3 years	Joseph P. Zawadsky, M.D., Middlesex
4th District	3 years	George L. Triebenbacher, M.D., Ocean
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1st District	3 years	Edward M. Coe, M.D., Union
4th District	3 years	George T. Hare, M.D., Camden
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	2 years	William J. D'Elia, M.D., Monmouth
	2 years	Myles C. Morrison, Jr., M.D., Morris
	2 years	Frank Y. Watson, M.D., Essex
AMA Alternate Delegates:		
	**1 year	†Robert J. Weierman, M.D., Essex
	2 years	†Robert J. Weierman, M.D., Essex
	•2 years	Ralph J. Fioretti, M.D., Bergen
	2 years	S. Thomas Carter, Jr., M.D., Camden
	2 years	William E. Ryan, M.D., Mercer
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6th Member	2 years	Howard H. Lehr, M.D., Union
Medical Services:		
5th District	2 years	John J. Pastore, M.D., Cumberland
6th Member	2 years	Robert C. Emery, M.D., Warren
Mental Health:		
3rd District	2 years	Doulgas H. Robinson, M.D., Mercer
6th Member	2 years	William R. Nadel, M.D., Union
Public Health:		
5th District	2 years	—no nominee—
6th Member	2 years	Glenn P. Lambert, M.D., Hunterdon
Public Relations:		
2nd District	2 years	Joseph W. Bitsack, M.D., Bergen
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Publication	2 years	Clement H. Kreider, Jr., M.D., Monmouth

*Unexpired term in the event Dr. Costabile is elected 2nd Vice-President.
†Contingent candidate.
•Additional delegate allocation per AMA (1987).
**Unexpired term in the event Dr. Schauer is elected AMA delegate.

DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; AMNJ Report; New Members; Physicians Seeking Location in New Jersey

Trustees' Minutes March 15, 1987

A regular meeting of the Board of Trustees was held on Sunday, March 15, 1987, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Report of the President . . .
(1) Blue Shield Medallion Program . . . Suggested that physicians requesting information on a new insurance program promulgated by Blue Shield should contact Mr. Joseph C. Lucci at MSNJ headquarters.
(2) Health Policy Agenda for the American People . . . Noted that Dr. Schauer appointed Drs. Formica, Cherashore, Restivo, Robinson, and Franzoni to the Committee To Review the Recommendations of the Health Policy Agenda.

Medical-Political Action . . . Thanked Dr. Ryan for his work in political action, noting a letter soliciting funds for MedAc will be sent in the near future.

Report of Executive Director . . .
(1) MSNJ Paid Membership . . . Noted total 1987 paid memberships at this time amount to 6,212.
(2) MSNJ Financial Statements . . . Approved the financial statements for the period ending January 31, 1987.
(3) Regulations of the State Board of Medical Examiners . . .
(a) Pronouncement of Death and Completion of Death Certificates . . . Observed that the SBME is expected to discuss certain inconsistencies in the rule proposal.
(b) Nurse Anesthetists . . . Noted that the MSNJ recommendation that nurse anesthetists must be supervised and that no more than two nurse anesthetists may be supervised simultaneously has been approved tentatively by the SBME.
(3) Legislation . . .
(a) Tort Reform . . . Reemphasized that the President has sent letters to all members of MSNJ urging support of tort reform legislation.
(b) Medicare Participation (A-2511, A-3305) . . . Observed that both bills are stalled and a substitute bill may be introduced. (Note: A-2511 requires physicians to accept Medicare unconditionally and A-3305 requires physicians to accept Medicare assignment for services exceeding $50 when the patient presents a Pharmaceutical Assistance to the Aged and Disabled card (PAAD). MSNJ is actively opposed to both bills.)
(c) Physician DRG . . . Noted that the AMA has undertaken an all-out effort to fight the inclusion of any physician services (i.e. radiologists, anesthesiologists, pathologists) in the DRG system.
(d) Physical Therapy (A-2647) . . . Noted that A-2647 would prevent physicians from employing physical therapists or having a financial interest in a physical therapy practice. Emphasized the disastrous potential effects should this bill become law.
(5) AMA Appointments . . .
(a) Council on Long-Range Planning and Development . . . Learned that Palma E. Formica, M.D. has been reappointed to the AMA Council on Long-Range Planning and Development beginning July 1, 1987, to June 30, 1990.
(b) Residency Review Committee for Pathology . . . Learned that Carolyn W. Watson, M.D., has been appointed to the AMA Residency Review Committee for Pathology.
(6) HMO/Alternative Delivery Study . . . Noted that the final bill for the study performed by Touche Ross was $119,000 though the agreement called for $45,000 plus expenses; Mr. Maressa wrote to Touche Ross stating that MSNJ would pay no more than $71,000.
(7) Medicare Benefits Explanation . . . Was supplied a brochure by the American Society of Internal Medicine explaining Medicare benefits.

UMDNJ Report . . . Received as informational the monthly report from Stanley S. Bergen, Jr., M.D.; the report highlights the following: PRO will continue to hold teaching physicians responsible for the decisions of their students; the Committee of Interns and Residents after launching a limited job action against the University agreed to participate in the mediation sessions—salary is the issue; a proposal to treat AIDS patients outside the conventional hospital setting due to the escalation of AIDS statistics; and a required vaccination against hepatitis for all new students of UMDNJ.

New Jersey Hospital Association . . . Received as informational a report by Louis P. Scibetta highlighting the following: AIDS Look Back Program is underway; and New Jersey hospitals will be reimbursed for Medicare outpatient services in accordance with the national Medicare Prospective Payment System, resulting in the anticipated loss of $25 million in reimbursement.

Council on Legislation . . .
(1) Action Deferred Bills . . .
(a) A-1242: To Establish a Central Registry of Persons Enrolled in Methadone Programs . . . Approved the action of the Council on Legislation stating "disapproved, because this legislation would be impractical and expensive; also such a registry reflects a solution to a problem that does not exist."
(b) S-1801: Requires Food Processors and Public Eating Places To Provide Written Notice to Consumers, if, during the Course of Processing, Food Has Been Treated with Radiation . . . Approved the position of active opposition.
(2) Current State Legislation . . . Approved all the positions recommended by the Council on Legis-

lation except for **S-2472** (provides that postgraduate internship participants in approved programs may write orders which do not require countersignature by a licensed physician), position changed to approved; **A-3305** (requires licensed health care providers who treat Medicare enrollees to accept the Medicare fee determination if the beneficiary presents to the provider a valid PAAD card), position changed to active opposition; and **A-3137** (allows HMO beneficiaries free choice of provider; limits HMO liability to its established fee schedules; and in the case of capitation or salaried plans the Medicaid fee schedule would be used), discussion postponted until next meeting due to opposition of the bill from the New Jersey Academy of Family Physicians.

Committee on Maternal and Child Care . . . Approved the following recommendation:

That the Medical Society of New Jersey communicate to the Family Planning Association of New Jersey that its Committee on Maternal and Child Care is in favor of family life education as it now exists in the public school system, with curricular emphasis on deterring unwanted pregnancies.

New Business . . .
(1) Nonionic Contrast Agents for Intravenous Administration . . . Received a comprehensive report on nonionic contrast agents and asked Dr. Hirsh to bring the matter to the attention of the NJHA Board of Trustees.
(2) Senior Citizens Forum . . . Noted that the First Annual Senior Citizens Forum will address the destabilization of health care, scheduled for April 9, 1987.

Correspondence . . . Reviewed a letter from Congresswoman Marge Roukema advising of a senior citizens' health forum in northern New Jersey; Secretary Otis Bowen will speak on comprehensive insurance coverage for catastrophic illness through Medicare.

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.
President

The timing could not have been more ironic. On Tuesday, March 10, the Vatican issued a major doctrinal statement condemning the use of in vitro fertilization and many other developing birth technologies. Four days earlier, a 38-year-old New Jersey woman without functioning ovaries tested pregnant, after undergoing in vitro fertilization with a donated ovum at UMDNJ-University Hospital in Newark. The event made the University of Medicine and Dentistry of New Jersey only the second institution in the country to achieve such a pregnancy.

It is not my purpose here to take issue with the Vatican, other than to say that although I respect the right of the opinion, I do not think any effort to extend the jurisdiction of the doctrinal statement to non-Catholics through legislation is appropriate. This is an action that the Vatican has urged. It well may be necessary to regulate certain aspects of the new birth technologies, but not eliminate the procedure itself. An outright ban on in vitro fertilization needlessly would deny the fulfillment of parenthood to many patients, in the name of a belief system that they may not share.

I am more interested in describing the procedure itself, and in expressing the pride I feel that the team of physicians working on the cutting edge of reproductive endocrinology is part of UMDNJ.

This achievement underscores the importance of our ongoing drive to attract top-flight researchers and clinicians to the faculty. The three physicians involved are all relative newcomers to UMDNJ. Gerson Weiss, M.D., chairman of the Department of Obstetrics and Gynecology at UMDNJ-New Jersey Medical School, joined us little more than a year ago after a decade at New York University. Dr. Weiss recruited his two colleagues, Cecelia Schmidt, M.D., director of the in vitro program, and Dominique deZiegler, M.D., who designed the protocol for synchronizing the cycles of the ovum donor and recipient.

The need to synchronize the cycles is what makes this procedure so much more difficult than a routine in vitro fertilization. The UMDNJ team achieved the pregnancy on the first try with the first patient, a tribute to the efficacy of the innovative techniques they used.

Donor-egg pregnancies previously had been achieved in Virginia, Israel, and Australia; but the UMDNJ team refined the procedure in two important ways. Ova from the donor were retrieved without surgery through the use of a transvaginal ultrasound probe. Use of this probe dramatically lowers the threshold of the commitment that must be made by a potential egg donor; previous pregnancies involved surgical removal of the ova.

Previous procedures relied on estrogen pills to regulate the hormone level of the recipient, in the absence of functioning ovaries. That method caused nausea and was not very reliable, because the liver eliminated an unpredictable amount of estrogen. In the case of the New Jersey woman, the estrogen was applied through transdermal patches, bypassing the liver and delivering the estrogen directly to the bloodstream.

The process took place in the specially equipped Center for Fertility and Reproductive Medicine at University Hospital, headed by Dr. Schmidt. The Center offers women the most advanced care available for disorders including infertility, endometriosis, premenstrual syndrome, and menopause-related dysfunctions.

This procedure, and other reproductive breakthroughs, obviously raise profound ethical questions. The painful Baby M case shows all too clearly the potential for conflict of values and confusion when impersonal procedures are introduced into this most personal of arenas.

Despite these legitimate concerns, we remain committed to improving the state of the art in reproductive technology, and in other fields as well. For every Baby M case, there are many stories with happy endings that take place far from the glare of television cameras. And as Dr. Weiss points out, we can take refuge if we wish in another religious message; he refers to the Biblical injunction to be fruitful and multiply.

AMNJ Report

Arthur Krosnick, M.D.
President

The Academy is pleased to announce that the New Jersey Society of Physical Medicine and Rehabilitation has joined our group of affiliated specialty societies. The current officers of NJSPMR are: Seymour Pedinoff D.O., President, M.

Noel Jennings, M.D., Vice-President, John J. Kraus, M.D., Secretary, and Robert Krotenberg, M.D., Treasurer.

The Academy is sponsoring a number of outstanding major symposia: *April 22, 1987* (Wednesday), "Osseointegrated Implants." The Academy's Dental Section is presenting an all-day meeting on this topic of current interest to practicing dentists and other health care professionals. Faculty will include the Director of Implant Dentistry from the University of Pennsylvania Dental School and a New Jersey orthopedist will discuss implants in orthopaedics. The chairman will be Gary Rosenblatt, D.M.D., and the symposium will be held at The Mountainside Hospital, Montclair. *May 16, 1987* (Saturday), "Diabetes Mellitus: Achieving Control in your Office Practice." The all-day meeting will emphasize how to deal with practical problems encountered in an office-based practice and will concentrate on procedures of clinical relevance. Arthur Krosnick, M.D., will be the chairman and the symposium will be at the Sheraton at Woodbridge Place and Towers, Iselin. *May 28, 1987* (Thursday), "Alzheimer's Disease Update—1987." The all-day meeting represents the culminating event in the Academy's 1986-1987 Alzheimer's disease grant from the State Department of Community Affairs and Health through the Brookdale Foundation. An outstanding nationally prominent faculty has been assembled to address physicians and other health care providers who wish to expand their understanding of this illness.

Membership Directory Update

Please note the following additions and corrections:

ADDITIONS

Essex County

Maplewood

DIX, M.D., Jacquelyn E., **OB & GYN,** 1877 Springfield Ave., 07040. Tel. 273-6733, 761-1990. 1-7 M-Th. B'50. UMDNJ(N) '76. 35152. D-OG, FACOG, ESSEX CO, AMA, Att, Beth Israel, Newark.

Middlesex County

East Brunswick

KRON, M.D., M. Stanley, **DIAG RAD, ULTRA, NUC MED, CT,** Rad Grp of New Brunswick, 579 Cranbury Rd, 08816. Tel. 390-0030. By appt. B'42. Downstate '68. 25557. D-R(DR), MID CO. Active, RWJ Med Ctr, New Brunswick, Asso, St. Peter, New Brunswick.

New Brunswick

303 George St., 08901. Tel. 249-4410. By appt.

Monmouth County

Freehold

KRAKAUER, M.D., Randall S. **RHEUM,** Doctors Park, 900 W. Main St. 07728. Tel. 780-7650. B'49. Albany '72. 42538. D-M (RHEUM) FACP, MON CO. Asso, Freehold Area, Freehold, Dir, St. Michael, Newark.

Roseland

190 Eagle Rock Ave, 07068 Tel. 226-2224

Passaic County

Fair Lawn

ZALKOWITZ, M.D., Alan, **INT MED, RHEUM,** 19-21 Fair Lawn Ave., 07410. Tel. 796-2255. 8-5 Daily. B'43. Louvain '70. 28880. D-M (RHEUM) PAS CO. Att, Int Med, Barnert, Paterson, Valley, Ridgewood.

Ridgewood

The School House, 174 Union St. 07450. Tel. 278-2211. By Appt.

CORRECTIONS

Camden County

Cherry Hill

BRAVERMAN, M.D. Gerald M. **INT MED; RHEUM,** 1034 E Prof Bldg, Rt 70 & Kingston Dr, 08034. Tel. 429-2464. By appt. B'52. Guadalajara '78. 39093. D-M, CAM CO, AMA. Active, Cooper, Camden, Asso, W Jersey E. Voorhees, Asso, Garden State, Marlton.

Essex County

Livingston

ROTHKOPF, M.D., Michael M., **INT MED,** 124 E. Mt Pleasant Ave., 07039 Tel. 994-0027. B'53. East VA '79. 37919. D-M, ESSEX CO, AMA, Dir, Intensive Care, VA, East Orange, Att, St Barnabas, Livingston.

Middlesex County

AGARWAL, M.D., Kishan C., Cons, Muhlenberg, Plainfield, Elizabeth Gen, Elizabeth, St Elizabeth, Elizabeth, Children's Spec., Mountainside, Christ, Jersey City, Hackensack, Hackensack, Jersey Shore, Neptune, General, Passaic, Kennedy Mem, Saddle Brook, St Clare-Riverside, Denville, Clin Asst Prof, UMDNJ(N), Newark.

Breast Cancer Program

Because early detection of breast cancer can result in a decrease in mortality of 30 percent, the American Cancer Society—New Jersey Division is sponsoring a program to make physicians and patients more aware of the usefulness of mammography. On May 16, 1987, women can go, by appointment, to their local hospitals to learn breast self-examination, have a breast examination, and receive a voucher for a mammogram (if she is over 35 and never had one). This special program is not a screening process—it is an educational program for physicians and consumers. For more information, contact the American Cancer Society—New Jersey Division at 201-297-8000 or your local county unit.

Errata

The heading for the second paragraph, second column on page 40 in the article, "Sialography: A Brief Update," by Edward G. Moss, M.D., (Volume 84:1, 39-41, 1987) should read: "CHRONIC *NON*OBSTRUCTIVE SIALADENITIS." (Italics indicate correction.)

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ALLERGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, clinical immunology. Solo or partnership. Available July 1987.

ENDOCRINOLOGY—Madeline M. Manzione, M.D., 141 Holmes St., Apt. 16, Belleville, NJ 07109. New York Medical 1979. Board eligible. Board certified (IM). Group, partnership, solo. Available.

FAMILY MEDICINE—James E. Bellamy, D.O., 1642 N. Cedar Loop, Ardmore, OK 73401. UHS-Com Kansas City 1982. Board certified. HMO, group, partnership. Available July 1987.

Kenneth W. Cartaxo, M.D., 3 Roosevelt Ave., West Orange, NJ 07052. Guadalajara 1980. Board certified. Group or partnership. Available.

IMMUNOLOGY—Jerome Michael Shier, M.D., 11546 February Cir., Apt. 201, Silver Springs, MD 20904. UMDNJ 1982. Board eligible. Also, allergy. Solo or partnership. Available July 1987.

INTERNAL MEDICINE—Harvey Mossman, M.D., 120 Marcellus Rd., #2U, Mineola, NY 11501. Med. Coll. of Pa. Board eligible. Group, partnership, solo. Available July 1987.

Christopher J. Nickerson, M.D., 421 Conrad Rd., Englewood, NJ 07631. Milan (Italy) 1977. Board certified. Group, partnership, solo. Available.

Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, pulmonary. Board certified. Group or partnership. Available July 1987.

Arvind Viradia, M.D., 101 Madison Rd., Parsippany, NJ 07054. NHL Municipal (India) 1982. Group, partnership, solo. Available.

NEUROLOGY—M.E. Dughly, M.D., 9001 Ridge Ave., Unit 28, Philadelphia, PA 19128. Damascus (Syria) 1974. Board eligible. Group, partnership, solo, hospital. Available.

OBSTETRICS/GYNECOLOGY—Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. Texas (San Antonio) 1983. Board eligible. Group or partnership. Available July 1987.

PEDIATRICS—Susil Kamar Malhotra, M.D., 2653 South Blvd., Apt. #154, Auburn Heights, MI 48057. Dhanbad (India) 1979. Board eligible. Available.

PSYCHIATRY—Arthur Dworetz, M.D., 2355 Tilbury Ave., Pittsburgh, PA 15217. North Carolina 1983. Board eligible 1987. Group, partnership, solo. Available July 1987.

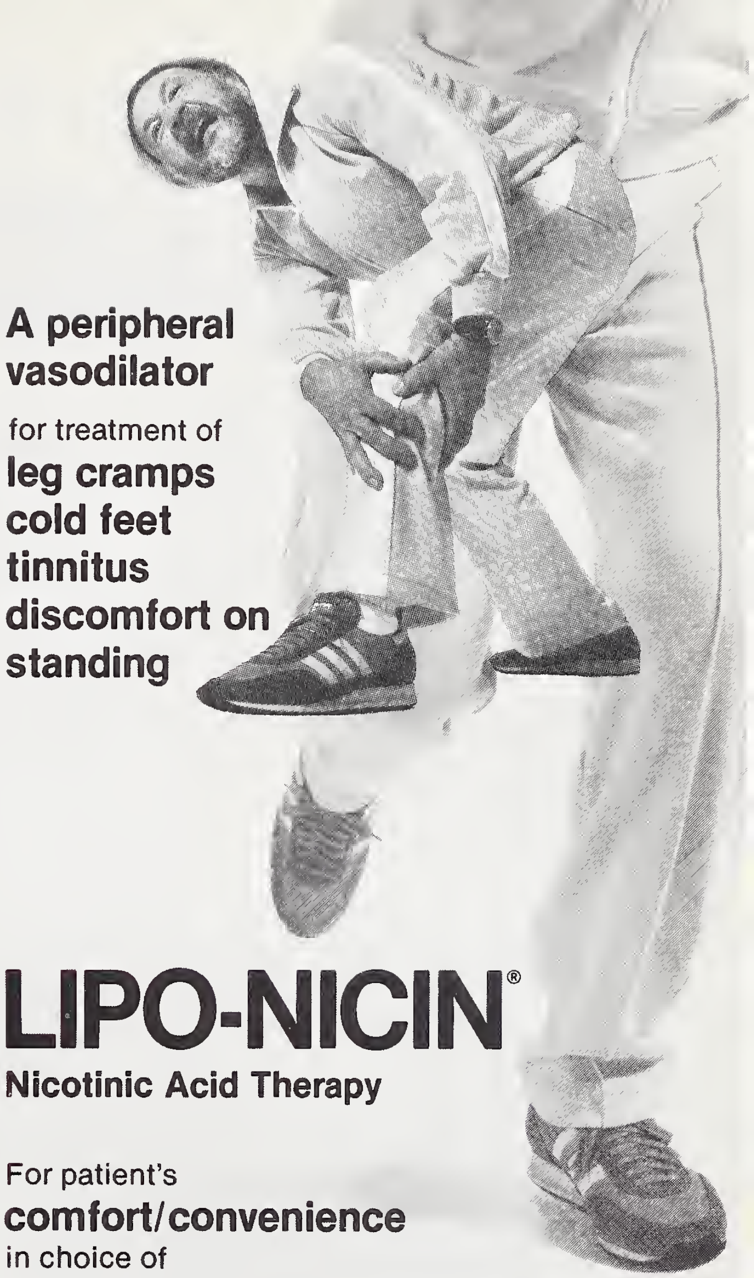
PULMONARY—Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

SPORTS MEDICINE—F.J. Bejjani, M.D., Ph.D., 375 South End Ave., New York, NY 10280. University of Paris 1980. Board eligible. Group or partnership. Available.

SURGERY—Peter H. Block, M.D., 1332 Weathervane Ln., Apt. 2A, Akron, OH 44313. New York Medical 1982. Board eligible. Group or partnership. Available July 1987.

Mohamad S. Hashim, M.D., 200 Trenton Rd., Box 742, Browns Mills, NJ 08015. Damascus (Syria) 1977. Solo, partnership, clinic, hospital. Available.

Millard D. Strutin, M.D., 369 Mountain Ave., Springfield, NJ 07081. Rome 1981. Board eligible. Solo. Available.



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Somers Point, 08244
Tel: 609-653-3918

Bergen County Medical Society
Mr. George F. Willis
Executive Director
Mrs. Joan M. Basic, CAE
Executive Secretary
302 Union St., Hackensack, 07601
Tel: 201-489-3140

Burlington County Medical Society
Mrs. Catherine C. Pegues
Executive Secretary
P.O. Box 56, Medford, 08055
Tel: 609-654-5255

Camden County Medical Society
Ms. Ardith R. Lane
Executive Director
Pavilions of Voorhees
2301 Evesham Rd., Suite 206
Voorhees, 08043
Tel: 609-772-0800

Cape May County Medical Society
Mrs. Ione Williams
Executive Secretary
Burdette Tomlin Memorial Hospital
Cape May Court House, 08210
Tel: 609-465-2000, Ext. 5183

Cumberland County Medical Society
Mrs. Lillian R. Ashton
Executive Secretary
3051 N. East Ave., Vineland, 08360
Tel: 609-696-9212

Essex County Medical Society
Mr. Arthur R. Ellenberger
Executive Secretary
80 Pompton Ave., Verona, 07044
Tel: 201-239-9392

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938 Locksley La., Woodbury, 08096
Tel: 609-845-6161

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Doctors Office Bldg.
142 Palisade Ave., Room 211
Jersey City, 07306
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Mrs. Iris Owens
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Hunterdon Medical Center
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Flemington, 08822
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Mercer County Medical Society
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Tel: 609-882-1048

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Tel: 201-257-6800

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37 Highway 34 South
Colts Neck, 07722
Tel: 201-462-4953

Morris County Medical Society
Mrs. Anne A. Marek
Executive Director
51 Elm St., Morristown, 07960
Tel: 201-539-8888

Ocean County Medical Society
Mr. John J. Schaefer
Executive Secretary
4 Citadel Dr., Jackson, 08527
Tel: 201-367-6633 or
201-350-2814

Passaic County Medical Society
Mr. William T. McGuire
Executive Director
642 Broad St.
Clifton, 07013
Tel: 201-777-2400

Salem County Medical Society
Mrs. Mariana F. Spangler
Executive Secretary
P.O. Box 325
Pennsville, 08070
Tel: 609-935-4009

Somerset County Medical Society
Mrs. Betty Menapace
Executive Secretary
c/o Somerset Medical Ctr., Rehill Av
Somerville, 08876
Tel: 201-685-2910

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Mrs. Maxine Crisman
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R.D. 7, Box 682
Newton, 07860
Tel: 201-383-5413

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Ms. Irene Rosenthal
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347 Lincoln Ave. East
Cranford, 07016
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PAUL J. HIRSCH, M.D.

1987 Citizens Award Recipient
MARY STRONG

Further information can be obtained by contacting the Academy of Medicine of New Jersey at 1-609-896-1717.

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of New Jersey
presents

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Saturday, May 16, 1987
at
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Iselin, New Jersey

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The emphasis in each presentation will be on practical problems encountered in an office-based practice and will concentrate on procedures of clinical relevance.

Symposium Chairman: ARTHUR KROSNICK, M.D.
President, Academy of Medicine of New Jersey

For Further Information on Registration, Faculty and Fees, Please Contact:

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ALZHEIMER'S DISEASE UPDATE—1987

Thursday, May 28, 1987
8:00 a.m.-5:00 p.m.
at
MONMOUTH MEDICAL CENTER
Main Auditorium
300 Second Avenue
Long Branch, New Jersey

Alzheimer's disease afflicts over three million individuals in this country. With more people reaching "golden pond" the prevalence of this disorder is expected to rise significantly in the near future.

This conference is directed at physicians and other health care providers who wish to expand their understanding of this illness.

The course faculty has been carefully selected for their expertise in this field and their dedication to better understand and treat individuals afflicted with Alzheimer's disease.

Conference Chairman: JOEL S. GROSS, M.D.

For Further Information on Registration, Faculty and Fees, Please Contact:

Dana R. Davies,
Academy of Medicine of New Jersey
Two Princess Road,
Lawrenceville, NJ 08648
Phone: (609) 896-1717

CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

This list is compiled through the cooperation of the Committee on Medical Education of the Medical Society of New Jersey, The Academy of Medicine of New Jersey, the New Jersey Chapter of the American Academy of Family Physicians, and the Office of Continuing Medical Education of the UMDNJ. For information on accreditation, please contact the sponsoring organization(s), indicated by italics—last line of each item.

ANESTHESIOLOGY

June

1 **Lecture Series**
8 7:45-8:45 A.M.—Newark Beth Israel
15 Medical Center, Auditorium,
22 Newark
29 *(UMDNJ and Newark Beth Israel Medical Center)*

3 **Anesthesiology Grand Rounds**
10 4 P.M.—100 Bergen St., Newark
17 *(UMDNJ)*
24

CARDIOLOGY

June

2 **Ventricular Arrhythmias and New Antiarrhythmic Agents**
7-8 P.M.—West Hudson Hospital, Kearny
(AMNJ, West Hudson Hospital)

3 **Advances in Cardiology**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

9 **University Echo Club**
7:30 P.M.—University Hospital, Rm. H-349, Newark
(UMDNJ)

MEDICINE

June

1 **University Hospital Tumor**
8 **Conference**
15 8 A.M.—University Hospital,
22 Rm. H-349, Newark
29 *(UMDNJ)*

2 **Pulmonary Conference**
9 8-9 P.M.—University Hospital,
16 Rm. H-349, Newark
23 *(UMDNJ)*
30

2 **Rheumatology Staff Conferences**
5:30 P.M.—Robert Wood Johnson Medical School, Academic Health Science Ctr., Rm. 393, New Brunswick
(UMDNJ)

3 **Continuing Education Series**
17 **1986-1987**
4:15-5:15 P.M.—1199 Pleasant Valley Way, West Orange
(Kessler Institute for Rehabilitation)

3 **Lecture Series: 1986-1987**
10 10:30-12 noon—Christ Hospital, Jersey City
(AMNJ)

3 **Symposium on Gastroenterology and Infectious Diseases**
9-4 P.M.—Overlook Hospital, Auditorium, Summit
(AMNJ)

3 **NJ Gastroenterological Society/NJ Society for Gastrointestinal Endoscopy**
2-5 P.M.—Joint Annual Meeting, The Manor, West Orange
(UMDNJ)

3 **Proper Use of Antibiotics**
10:30 A.M.—St. Mary's Hospital, Passaic
(UMDNJ)

4 **Blood Bank Conference**
11 4-5 P.M.—University Hospital,
18 Rm. C-128, Newark
25 *(UMDNJ)*

4 **Allergy, Immunology, and**
11 **Infectious Diseases**
18 11-12 P.M.—Children's Hospital,
25 Newark
(UMDNJ)

4 **20th Annual CME Series:**
11 **1986-1987**
18 5-6 P.M.—Somerset Medical Center,
Somerville
(AMNJ)

5 **Rehabilitation Medicine Grand Rounds**
1:30-2:30 P.M.—New Jersey Medical School, Newark
(UMDNJ)

5 **Asbestosis**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

5 **Nonoperative Management of Chronic Back Pain**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

5 **Urology Basic Science Conference**
12 3-4 P.M.—New Jersey Medical
19 School, Room C-600, Newark
26 *(UMDNJ)*

5 **Urology Grand Rounds**
12 4-6 P.M.—New Jersey Medical
19 School, Newark
26 *(UMDNJ)*

5 **Pain Management Center**
12 8 A.M.—100 Bergen St., Newark
19 *(UMDNJ)*
26

9 **Diabetes**
8:30 A.M.—Palisades General Hospital, North Bergen
(AMNJ)

10 **Emergency Center Triage in Trauma Cases**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

10 **Food Alergy: Fad or Fact**
10:30 A.M.—St. Mary's Hospital, Passaic
(UMDNJ)

12 **Current Clinical Concepts in Rheumatology/Immunology**
12:15-1:15 P.M.—Kennedy Memorial Hospital, Conference Rm.
(UMDNJ)

12 **Current Status of Vasodilator Therapy in LV Failure**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ)

13 **7th Annual Advances in Gastroenterology**
7:30 A.M.-4 P.M.—Bally's Park Place Casino Hotel, Atlantic City
(AMNJ)

16 **Hypertension in the Elderly**
12 noon—St. Mary's Hospital, Orange
(AMNJ, St. Mary's Hospital)

16 **Cyclosporine Nephrotoxicity**
4-5 P.M.—Robert Wood Johnson Medical School, Rm. 393, New Brunswick
(UMDNJ)

17 **Regional Urology Rounds**
7-8:30 A.M.—Robert Wood Johnson Medical Center, Rm. 108B, New Brunswick
(UMDNJ)

17 **The Future of Transplantation**
12 noon-1 P.M.—Robert Wood Johnson Medical Center, Medical Education Building, Rm. 102, New Brunswick
(UMDNJ)

17 **Interhospital Rheumatology Rounds**
4:30-6 P.M.—University Hospital, Rm. I-355, Newark
(UMDNJ)

17 **Current and Future Approaches to Therapy of Parkinson's Disease**
11:30 A.M.—Rahway Hospital, Conference Rm.
(Rahway Hospital and AMNJ)

18 **Hot Tips from the Journals 1986-1987**
5-6:30 P.M.—Somerset Medical Center, Fuld Auditorium, Somerville
(Somerset Medical Center and AMNJ)

18 **20th Annual CME Series 1986-1987**
5-6:30 P.M.—Somerset Medical Center, Somerville
(AMNJ)

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4:30 PM	STANDARD THERAPY	*Bruno Manno, M.D.*
5:00 PM	NEWER THERAPY	*Mariell J. Likoff, M.D.*
5:30 PM	DIALYSIS	*Charles Swartz, M.D.*

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18 **Reflex Sympathetic Dystrophy Pain Therapy**
11:00 A.M.—St. Joseph Hospital, Paterson
(UMDNJ)

18 **Management of Hepatitis and Drug-Induced Liver Disease**
3:00 P.M.—Ancora Psychiatric Hospital, Hammonton
(UMDNJ)

19 **Deviants, Drugs, and the Red Snapper: Tuberculosis Then and Now**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ and N.J.M.S.)

24 **Clinical Decision Analysis**
12 noon-1 P.M.—Robert Wood Johnson Medical School, Medical Education Building, Rm. 102, New Brunswick
(UMDNJ)

26 **Medical Mortality Conference**
8:30 A.M.—United Hospitals Medical Center, Annex Auditorium, Rms. B and C, Newark
(UMDNJ and N.J.M.S.)

27 **Issues and Advances in Medicine,**
28 **'87**
Hyatt Hotel, Princeton
(AMNJ)

NEUROLOGY/PSYCHIATRY

June

2 **Case Seminars and Supervision**
16 **To Improve Psychotherapeutic Techniques**
8-10 P.M.—312 Harding Drive, South Orange
(AMNJ)

3 **Grand Rounds/Psychiatry**
10:30-12 noon—New Jersey Medical School, Newark
(UMDNJ)

4 **Neurology Grand Rounds**
11 3-5 P.M.—Robert Wood Johnson
18 Medical Center, Medical Education Building, Rm. 108A, New Brunswick
(UMDNJ and AMNJ)

4 **Alzheimer's Disease**
11:00 A.M.—St. Joseph's Hospital and Medical Center, Paterson
(AMNJ)

4 **Case Seminars and Supervision**
18 **To Improve Psychotherapeutic Technique**
8-10 P.M.—312 Harding Drive, South Orange
(Advanced Psychiatric Study Group and AMNJ)

4 **Neurology Grand Rounds**
11 3-5 P.M.—Robert Wood Johnson
18 Medical School, Medical Education Building, Rm. 108A, New Brunswick
(UMDNJ)

8 **Alzheimer's Disease**
7-8 P.M.—Burlington County Memorial Hospital, Mt. Holly
(UMDNJ)

11 **Neurobiological Mechanisms of Major Psychiatric Disorders**
18 **Group Interactions in Treatment of Geriatric Patients**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

12 **Neurological Implications of Lactic Acidosis**
8-9 A.M.—Overlook Hospital, Summit
(Overlook Hospital and AMNJ)

16 **Hypertension in the Elderly**
12 noon—St. Mary's Hospital, Orange
(AMNJ)

18 **PRO—Its Present Impact and Future Implication**
5:30-6:30 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

18 **Reflex Sympathetic Dystrophy-Pain Therapy**
11:00 A.M.—St. Joseph's Hospital, Paterson
(AMNJ)

23- **Beyond Despair: Empowerment in**
24 **a Nuclear Age**
All Day—Carrier Foundation, Belle Mead
(Carrier Foundation)

July

2 **Caring for the Caretakers: Treating Impaired Professionals**
9 **Calming the Agitated Elderly Patient**
16 **Creative Theater as Therapy**
30 **Getting Alcoholics from Your Office, into Treatment, and Back to Your Office**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

OBSTETRICS/GYNECOLOGY

June

5- **Annual Meeting—NJ Obstetrical**
6 **and Gynecological Society**
Trump Plaza, Atlantic City
(AMNJ)

PATHOLOGY

June

2 **Anatomic Pathology Specialty**
9 **Conference**
16 5:15-6 P.M.—New Jersey Medical School, Medical Science Building, Rm. C-355, Newark
(UMDNJ)

3 **Experimental Pathology Seminar**
12 noon—New Jersey Medical School, Medical Science Building, Rm. C-555, Newark
(UMDNJ)

3 **Pathology Grand Rounds**
10 1:30-5:30 P.M.—New Jersey Medical
17 School, Room C, Newark
24 *(UMDNJ)*

6 **Pathology-GI Conference**
9 3 P.M.—University Hospital,
16 Rm. E-155, Newark
23 *(UMDNJ)*
30

9 **Renal Biopsy Conference**
12:30-2 P.M.—Barnert Memorial Hospital, Conference Rm., Paterson
(Barnert Memorial Hospital)

10 **Neuropathology Conference**
24 10:30-12 noon—New Jersey Medical School, Rm. C-555, Newark
(UMDNJ)

18 **Renal Pathology Conference**
4 P.M.—University Hospital, Room E-155, Newark
(UMDNJ)

PEDIATRICS

June

5 **Children's Pediatric Surgical**
12 **Conference**
19 8 A.M.—United Hospitals Medical
26 Center, Rm. A, Annex Bldg., Newark
(UMDNJ)

5 **Pediatric Distinguished Lecture**
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JUNE 3, 1987
3:00 to 5:30 PM

DIAGNOSIS AND MANAGEMENT OF CARDIOMYOPATHY

MODERATOR: TERRY LANGER, M.D.

Classification and Clinical, Hemodynamic and Ventriculographic Findings	*Abdulmassih Iskandrian, M.D.*
Case Presentations	*Michael Blick, M.D.*
Drug Treatment: Long Term Results	*Garo Garibian, M.D.*
Cardiac Transplantations: Current Status	*Paschal Spagna, M.D.*
Questions and Answers	*The Audience*

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8 A.M.—Overlook Hospital, Wallace
Auditorium, Summit
(AMNJ)

5 **Advances in Pediatrics**
12 9:30-10:30 A.M.—New Jersey
19 Medical School, Medical Science
26 Building, Rm. B-610, Newark
(UMDNJ)

10 **Pediatric Update: 1987**
9:15-4:30 P.M.—Meadowland
Racetrack, Hambletonian Room,
East Rutherford
(AMNJ)

SURGERY

June

1 **Surgical Grand Rounds/**
8 **Distinguished Lecture Series**
15 4:30-6 P.M.—New Jersey Medical
22 School, Newark
29 *(UMDNJ)*

1 **Orthopedic Grand Rounds and**
8 **Lecture Series**
15 6-8 P.M.—New Jersey Medical
22 School, Medical Science Building,
29 Rm. B-556, Newark
(UMDNJ)

2 **Surgery: Visiting Professor Program**
5-6 P.M.—Robert Wood Johnson
Medical Center, Lecture Hall 102,
New Brunswick
(UMDNJ)

3 **Joint Annual Meeting of the N.J. Gastroenterological Society/N.J. Society for Gastrointestinal Endoscopy**
2-5 P.M.—The Manor, West Orange
(AMNJ)

3 **Surgical Grand Rounds**
8:30-10 A.M.—Robert Wood Johnson
Medical School, Rm. 102,
New Brunswick
(UMDNJ)

3 **Trauma Conference**
10 8 A.M.—University Hospital, Newark
17 *(UMDNJ)*
24

3 **Surgical Grand Rounds**
10 8:30-10:30 A.M.—Robert Wood
17 Johnson Medical School, Lecture
24 Hall 102, New Brunswick
(UMDNJ)

4 **Arthroscopic Surgery**
1-2 P.M.—Satellite Teleconference,
satellite telecast to New Jersey
hospitals
(UMDNJ)

4 **Vascular Surgery Conference**
11 **Rounds**
18 4 P.M.—Robert Wood Johnson
25 Medical School, Medical Education
Building, New Brunswick
(AMNJ)

5 **Cancer Research Colloquium**
12 noon-1:15 P.M.—New Jersey
Medical School, Medical Science
Building, Rm. G-506B, Newark
(Newark)

13 **7th Annual Advances in Gastroenterology**
7:30 A.M.-4 P.M.—Bally's Park Place
Casino Hotel, Atlantic City
(AMNJ)

16 **Urology/IVP Conference**
4-6 P.M.—New Jersey Medical
School, Rm. 600, Newark
(UMDNJ)

25 **Distinguished Lecture Series—Neurosurgery**
4-5:30 P.M.—University Hospital,
Rm. E-343, Newark
(UMDNJ)

26 **Cardiothoracic Journal Club**
7:30 P.M.—13 Ridgeway Drive,
West Orange
(UMDNJ)

SURGICAL SPECIALTIES

June

4 **Vascular Surgery Conference**
11 **Rounds**
18 4-5 P.M.—Robert Wood Johnson
25 Medical School, Medical Education
Building, New Brunswick
(UMDNJ)

17 **Ophthalmology/Grand Rounds**
7-9 P.M.—Eye Institute of New
Jersey, Annex Auditorium, Rooms
B and C, Newark
(UMDNJ)

MISCELLANEOUS

June

23 **Beyond Despair: Empowerment in**
24 **a Nuclear Age**
8:30 A.M.-4:30 P.M.—Carrier
Foundation, Belle Mead
(Carrier Foundation)

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BOOK REVIEWS

Art and Anatomy in Renaissance Italy; Clinical Electrocardiography; Clinical Genetics Handbook; Emergency Management of Pediatric Trauma

Art and Anatomy in Renaissance Italy

Bernard Schultz. Ann Arbor, MI, UMI Research Press, 1985. ($49.95)

Written by an art historian, this book provides us with an excellent account of the development of anatomy from the days of Aristotle, and emphasizes the close relationship known to have existed between the fine arts and anatomical studies as early as the Hellenistic period (3d c. B.C.), when human dissection was being pursued actively in the city of Alexandria. Dr. Schultz then carries us through the period of Galen's own studies on injured gladiators and Barbary apes, stressing his frequently expressed admiration for the "Canon" of Polyclitus as the perfectly proportioned male figure.

During the so-called Dark Ages and the early Middle Ages when human dissection was rigorously prohibited, depictions of the human figure remained unoriginal, depending largely on Byzantine prototypes. It was not until the earliest years of the 14th century that the Bologna master, Mondino, had the temerity to defy the papal ban and perform a public dissection. Although official sanction was not obtained until the brief of Pope Sixtus IV (1482), it certainly is no coincidence that the revival of anatomical studies was soon followed by the greatest single efflorescence of artistic activity in history, usually designated as the Italian Renaissance. Among the early masters known to have benefited from anatomical knowledge gained through observation or actual performance are such famous names as the painters Masaccio, Pollaiuolo, and Signorelli, as well as the sculptors, Ghiberti, and Donatello. Andrea del Verrochio, master of Leonardo, also is known to have evinced an unusual interest in the burgeoning science.

However, the most significant chapter of the book is devoted to a discussion of the anatomical contributions of the two titans of Italian art: Leonardo da Vinci and Michelangelo. We know that Leonardo's personal library contained one book on anatomy, as well as several others on surgery and medicine. From his numerous dissections he produced hundreds of anatomical drawings, including many of the internal organs, the majority of which now are preserved in the Royal Library at Windsor. It was only the untimely death of his collaborator, the anatomist Della Torre, which prevented the appearance of a projected volume which might well have revolutionized medical science many years before the publication of the 1543 Vesalius. Unfortunately, the Leonardo drawings bequeathed to a pupil at the master's death in 1519 remained unknown to students until rediscovered in the late 18th century. Michelangelo also began dissecting as a young man, continuing his studies in Rome under the anatomist Realdo Columbo, but unlike Leonardo he seems to have been primarily interested in the musculature of the human body as subjected to unusual stress and strain, and it was this overemphasis on distortion of the figure which led to the so-called mannerism of his innumerable followers.

Finally, despite the mediocre quality of the 82 illustrations, this book can be recommended strongly to all humanistic physicians who would like to know more about the affinity between the two disciplines, one which has persisted at least through the days of our own Thomas Eakins and has tapered off only gradually with the arrival of the nonobjective art of this century.

Morris H. Saffron, M.D., Ph.D.

Clinical Electrocardiography: A Primary Care Approach

Ken Grauer, M.D., and R. Whitney Curry, Jr., M.D. Oradell, NJ, Medical Economics Books, 1987. Pp. 544. Illustrated. ($24.95)

Another book on electrocardiography? The question shocks some and bores most. Yet, this is a very special text written by primary care physicians purportedly for their colleagues. While most of the material is aimed at the front-line cardiologist, there is considerable theoretical information as well as clinical problem-solving and humor.

Part One deals with traditional electrophysiologic concepts, an abbreviated review of arrhythmias, conventional alterations in contour, and an unusually clear resolution of a perennial enigma—axis deviation. A chapter devoted to theoretical considerations, leans heavily on vector loop representations that may intimidate the tyro. But, the review of the coronary circulation and its effects on the ECG is refreshing and different.

Part Two relates to clinical applications of variations in the ST segment, intraventricular conduction delays, myocardial infarction, and chamber enlargement.

Part Three is replete with case studies of metabolic disturbances, pseudoinfarction patterns, patients with chest pain, and cardiomegaly, those with tall R waves in right chest leads, as well as atypical ECGs in healthy subjects. The figures are large and nicely reproduced, while the interpretive discussions are comprehensive but compact.

This book is a pleasant surprise that I recommend for primary care physicians, cardiac care nurses, house officers, and experienced cardiologists. The novice will be able to handle most of it with diligent application, while the subtleties may entice even the advanced electrocardiographer.

Edwin L. Rothfeld, M.D.

Clinical Genetics Handbook

Ruth Y. Berini and Eva Kahn (eds). Oradell, NJ, Medical Economics Books, 1986. Pp. 386.

Clinical Genetics Handbook is edited by Ruth Y. Berini and Eva

Kahn under a grant of the Henry Kaiser family. This manual gives detailed discussions of genetic research, with less emphasis on clinical and management problems.

Because of the complexity of genetics, the editors delineated specifically how to use the book with the format designed for easy reference to relevant and more common genetic disorders for a family doctor. Further detail can be obtained from extensive references.

Each chapter, produced by a spectacular collection of the world's best geneticists, has bold letters for important sections associated with detailed charts, clearly demonstrated figures, and chromosomal maps. The topics include applied genetics, clinical genetics involving each organ system, and family planning. On page 85, Alzheimer's disease is outlined on two pages with genetic information that 50 percent are sporadic, and first-degree relatives have five times the incidence from index cases, up to a rate of 50 percent especially with early onset disease. Did you know that Down's syndrome patients who live into adulthood develop Alzheimer's histopathological changes. This is the most tragic of diseases and cannot be genetically counselled as the data still is too sketchy. Hence, this chapter falls short of the mark.

Nevertheless, for the nongeneticist who has to quickly review a potential genetic problem for a patient's family, this tabletop, softcover 386-page manual is a ready source to have around the office. My main criticism is that annotation of the bibliography was not done, so it is difficult to search out the original source. Can you imagine what the size of the next issue will be?

Leon G. Smith, M.D.

Emergency Management of Pediatric Trauma

Thom A. Mayer, M.D. Philadelphia, PA, W.B. Saunders Co., 1985. Pp. 552. Illustrated. ($60)

This textbook offers a unique contribution to the field of pediatric trauma and emergencies. The author's stated purposes are to provide: a comprehensive source of information on the evaluation, resuscitation, and initial therapy of minor and major pediatric trauma; a limited knowledge of definitive care of the injury; and an organization of pediatric trauma care within the emergency department. Although the organizational structure supports the development of these purposes, the book is not well balanced and is not solely focused on trauma but on emergency care for nontraumatized patients as well.

The text has a number of redundancies, e.g. several tables of medications for cardiac arrest, is sparsely illustrated, and is erratically referenced, a problem in multiauthored texts. I found too much emphasis placed on certain topics (use of the esophageal obturator airway in children and eye injuries—16 pages), while other important topics were too briefly discussed (pancreatic trauma—two paragraphs; spinal cord injury—5 pages). There was a 2-page discussion of croup and epiglottitis, while only one-half page was devoted to neck trauma.

When compared to existing textbooks on pediatric emergencies, *Textbook on Pediatric Emergency Medicine* by Fleisher and Ludwig in 1983 and *Emergency Pediatrics* by Barkin and Rosen in 1984, this book clearly is unique with its emphasis on trauma. However, both of the other books, which contain a procedural section and appendices, are more practical and useful.

Overall, we find the book to be a good source of information. The addition of a procedures section, some pragmatic suggestions on the difficulties of management of a traumatized child, e.g. best places for an intravenous line in various age groups or the dosages of radiocontrast material in children, and the elimination of nontraumatic emergency illnesses could make this text even more useful and better focused.

Stephen F. Wang, M.D.

Drs. Baber; Baran; Cavallaro; Cimillo; Davison; Greene; Hall; Lederer; McLaughlin; O'Connell; Okulicz; Taff; Twinem; Vargish; Yeaw; Yontef

Dr. Julius J. Baber

Julius Joseph Baber, M.D., a surgeon with offices in Jersey City and Bayonne until his retirement two years ago, died in St. Francis Hospital, Jersey City, on February 16, 1987. Dr. Baber was only 59 years old at the time of his death. A native of Jersey City, he received his medical degree from Cornell University Medical College in 1952. Dr. Baber was a member of our Hudson County component and of the American Medical Association. He was a Fellow of the American and International Colleges of Surgeons, and a Diplomate in surgery. Dr. Baber had been president of the medical staff of St. Francis Hospital, a long-time member of its board of trustees, and in 1982 was awarded the hospital's Medal of Honor for outstanding service to the institution and its patients. He had been an instructor in surgery at Cornell and at Seton Hall Medical College. Dr. Baber also was affiliated with Bayonne Hospital and Jersey City Medical Center.

Dr. Robert J. Baran

A radiologist in Newfoundland, Robert John Baran, M.D., died on February 3, 1987, at the untimely age of 40. Born in Brooklyn, New York, Dr. Baran was graduated from the State University of New York's Downstate Medical College in 1972. He was a Diplomate of the American Board of Radiology and had been a member of our Passaic County component.

Dr. William U. Cavallaro

William Underwood Cavallaro, M.D., a retired orthopedic surgeon from Madison, died on February 18, 1987, at Overlook Hospital, Summit, at 68 years of age. Born in Newark, Dr. Cavallaro received his medical degree from Columbia University's College of Physicians and Surgeons in 1942. He had been a member of our Morris County component and was a Fellow of the American College of Surgeons and of the American Academy of Orthopedic Surgeons. Dr. Cavallaro had been affiliated with Overlook Hospital where he had served as chief of orthopedic surgery for many years. During World War II, he had served in the medical corps of the Army of the United States, attaining the rank of captain.

Dr. Carmelo Cimillo

At only 63 years of age, Carmelo Cimillo, M.D., a Paramus psychiatrist, died on February 11, 1987. Born in Salerno, Italy, Dr. Cimillo was graduated from the Faculty of Medicine, Bari (Italy) in 1951. He emigrated to the United States 25 years ago and established an office in Ridgewood, later moving to Paramus. Dr. Cimillo was a member of our Bergen County component and had been affiliated with St. Joseph's Hospital and Medical Center, Paterson.

Dr. Wilbur S. Davison

A practitioner of family medicine in Pennsville for 50 years prior to his retirement in 1985, Wilbur Stafford Davison, M.D., died of a heart attack at his home on January 28, 1987. Dr. Davison was 77 years old at the time of his death. A native of Palmyra, Dr. Davison received his medical degree from Hahnemann Medical College, Philadelphia, in 1935. He had been a member of our Salem County component and of the American Medical Association. Dr. Davison had been affiliated with Salem County Memorial Hospital, and was involved in civic affairs in his community. He had served as school physician for 37 years, and was the physician for the Pennsville police and fire departments. In 1985, Dr. Davison was a recipient of MSNJ's Golden Merit Award in recognition of his 50 years in medicine.

Dr. Robert F. J. Greene

A retired anesthesiologist, Robert F. J. Greene, M.D., died on February 3, 1987, in Treasure Island, Florida. Born in 1920, Dr. Greene was a native of Union City. He was graduated from Hahnemann Medical College, Philadelphia, in 1945, and had been a member of our Hudson County component, but presently was an emeritus member of the Society. Dr. Greene also was a member of the American Medical Association.

Dr. Charles H. Hall, Jr.

We have been informed of the death of Charles Henry Hall, Jr., M.D., on January 20, 1987, at the age of 73. In 1979, recurring coronary heart disease forced Dr. Hall to retire. A native of Brooklyn, New York, Dr. Hall was graduated from Long Island College of Medicine there in 1939. Board certified as an anesthesiologist, he practiced emergency medicine. Dr. Hall originally was a member of our Passaic County component, later switching to Bergen County. He also was a member of the American Medical Association. Dr. Hall had been affiliated with St. Joseph's Hospital and Medical Center, Paterson, and with Bergen Pines County Hospital, Paramus. During World War II, he served with the medical corps of the United States Army, emerging with the rank of major.

Dr. Howard E. Lederer

A psychiatrist with an office in Totowa, Howard E. Lederer, M.D., died on February 17, 1987, at the age of 73. Born in Austria, he received his medical degree from the Medical Faculty at the University of Vienna in 1938. He emigrated to the United States and became a member of our Bergen County component. Dr. Lederer was affiliated with St. Joseph's Hospital and Medical Center, Paterson; Bergen Pines County Hospital, Paramus; Hackensack Medical Center; Holy Name Hospital, Teaneck; and Chilton Memorial Hospital, Wayne.

Dr. Thomas F. McLaughlin

A former president of the Middlesex County Medical Society, Thomas Francis McLaughlin, M.D., died on February 7, 1987, at the age of 77. A native of Montclair, Dr. McLaughlin was graduated from Georgetown University's Medical School in 1936. He established a practice in general surgery in Metuchen and became a member of our Middlesex County component and of the American Medical Association. Dr. McLaughlin was a Fellow of the American Society of Abdominal Surgeons. He had been affiliated with St. Peter's Medical Center, New Brunswick, J.F. Kennedy Medical Center, Edison, and the Rehabilitation Center, North Brunswick. In 1986, Dr. McLaughlin received MSNJ's Golden Merit Award.

Dr. James J. O'Connell

A New Brunswick psychiatrist, recently retired, James J. O'Connell, M.D., died at Robert Wood Johnson University Hospital, in that city, on February 9, 1987, at the advanced age of 80. Born in New Brunswick, Dr. O'Connell received his medical degree from Georgetown University School of Medicine in 1931. He was a member of our Middlesex County component and of the American Medical Association. Dr. O'Connell had been affiliated with St. Peter's Medical Center and Middlesex General Hospital, both in New Brunswick. He had served as director of psychiatry at many state facilities, including the State Home for Boys, Jamesburg, Children's Detention Homes, and the Department of Mental Hygiene. In 1981, Dr. O'Connell received MSNJ's Golden Merit Award.

Dr. Stanley J. Okulicz

Stanley John Okulicz, M.D., a retired urologist, died on February 22, 1987, at West Jersey Health System, Camden. Born in 1914, and a native of Philadelphia, Pennsylvania, Dr. Okulicz was graduated from Hahnemann Medical College, Philadelphia, in 1941. He had been a member of our Camden County component and of the American Medical Association. He was a Diplomate of the American Board of Urology, and was a Fellow of the American and International Colleges of Surgeons. During World War II, Dr. Okulicz served in the medical corps of the United States Navy, where he attained the rank of commander. He became a qualified neurologist during his naval stint. He had been affiliated with the Camden County Psychiatric Center, Lakeland, and the West Jersey Health System facilities at Camden, Berlin, and Voorhees.

Dr. Harry Taff

An Edgewater internist, Harry Taff, M.D., died on February 19, 1987. Born in London, England, in 1907, Dr. Taff was graduated from the Medical School of Birmingham (England) in 1935. He emigrated to the United States, established a practice in general medicine in Newark, and became a member of our Essex County component. From the Newark office, he later moved to West Orange where he remained until a recent move to Edgewater. Dr. Taff had been affiliated with the Hospital Center, Orange, and Saint Barnabas Medical Center, Livingston. In 1985, he was one of the recipients of MSNJ's Golden Merit Award, bestowed on physicians who have been in practice for 50 years.

Dr. Francis P. Twinem

A retired Hackensack urologist, presently living in Sarasota, Florida, Francis Patton Twinem, M.D., died on February 1, 1987, at the venerable age of 91. Born in West Virginia, Dr. Twinem was graduated from Harvard Medical School in 1925. He had been affiliated with the Brady Foundation at New York Hospital, and was consulting urologist at Monmouth Medical Center, Long Branch; Shore Memorial Hospital, Somers Point; and Bergen Pines County Hospital, Paramus. Dr. Twinem had been assistant professor of urology at Cornell University Medical School and director emeritus of urology at Hackensack Medical Center. He was a member of our Bergen County component and of the American Medical Association. Dr. Twinem was a Diplomate in urology and a Fellow of the American College of Surgeons. In 1975, he was a recipient of MSNJ's Golden Merit Award.

Dr. Hildegard S. Vargish

A practitioner of family medicine, Hildegard Sack Vargish, M.D., died in Tequesta, Florida, on February 11, 1987. She and her husband, Jacob J. Vargish, M.D., shared an office in River Edge for over 30 years. A native of Fairview, born in 1921, she was graduated from Long Island College of Medicine, in 1943. Dr. Vargish was a member of our Bergen County component and of the American Medical Association. She had been affiliated with Holy Name Hospital, Teaneck.

Dr. Ralph C. Yeaw

A retired Paterson urologist, Ralph Cady Yeaw, M.D., died in St. Joseph's Hospital and Medical Center in that city on February 4, 1987. Dr. Yeaw was 78 years of age at the time of his death. Born in Rutland, Vermont, he was graduated from the University of Rochester's School of Medicine and Dentistry in 1934. Dr. Yeaw had been a member of our Passaic County component and of the American Medical Association. He was board certified in his specialty, and was a Fellow of the American College of Surgeons. Dr. Yeaw was affiliated with Valley Hospital, Ridgewood; Presbyterian Hospital, New York City; and St. Joseph's Hospital and Medical Center, Paterson. Dr. Yeaw had been an assistant professor at Columbia University and taught urology for 30 years at the Squier Clinic. In 1984, he was one of those receiving MSNJ's Golden Merit Award.

Dr. Reuben Yontef

Reuben Yontef, M.D., a retired dermatologist, living in Boca Raton, Florida, died on January 1, 1987. Dr. Yontef, who had practiced in Bayonne and Springfield, was 74 years of age at the time of his death. A native of New York City, he was graduated from the University of Arkansas' School of Medicine in 1937. Dr. Yontef was a member of our Hudson County component and of the American Medical Association. He had been affiliated with Bayonne Hospital; Jewish Hospital and Rehabilitation Center, and Greenville Hospital, Jersey City; and Overlook Hospital, Summit. Had he lived, Dr. Yontef would have received MSNJ's Golden Merit Award at this year's annual meeting. During World War II, he served in the medical corps of the United States Army, emerging with the rank of major.

AUTHOR INFORMATION

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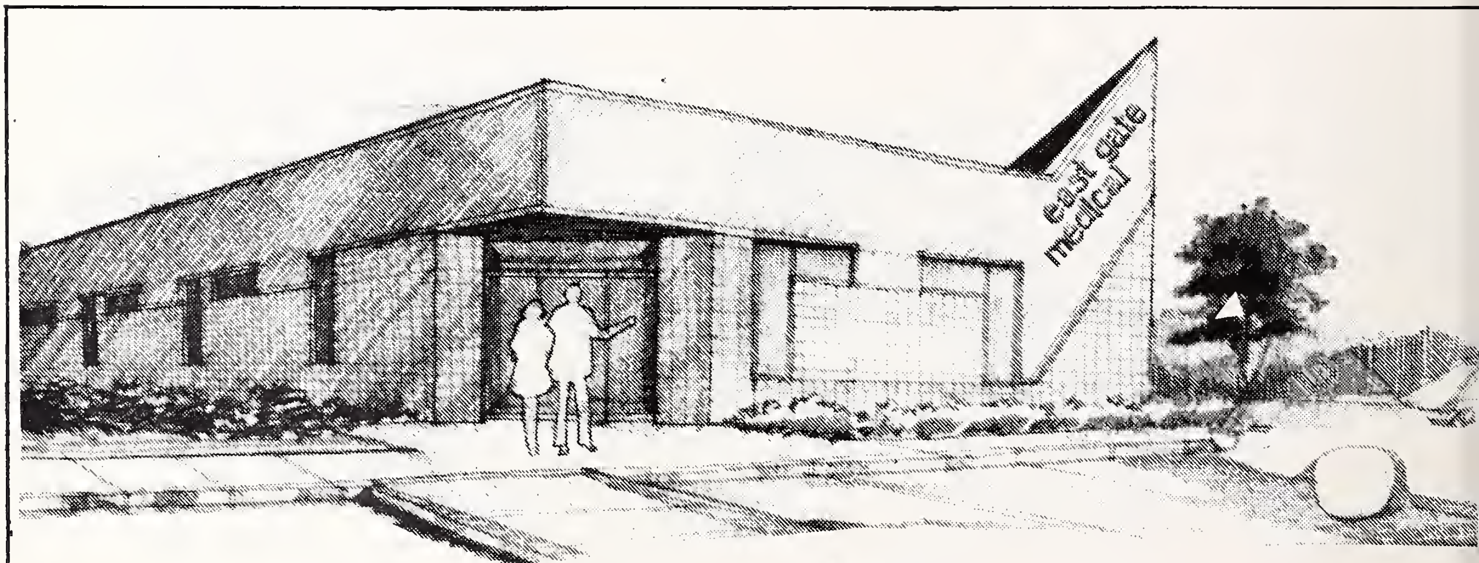

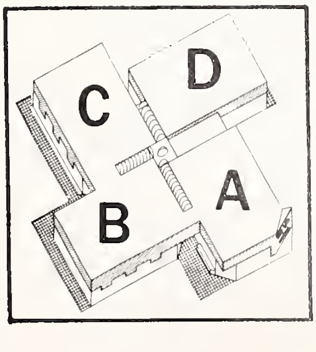

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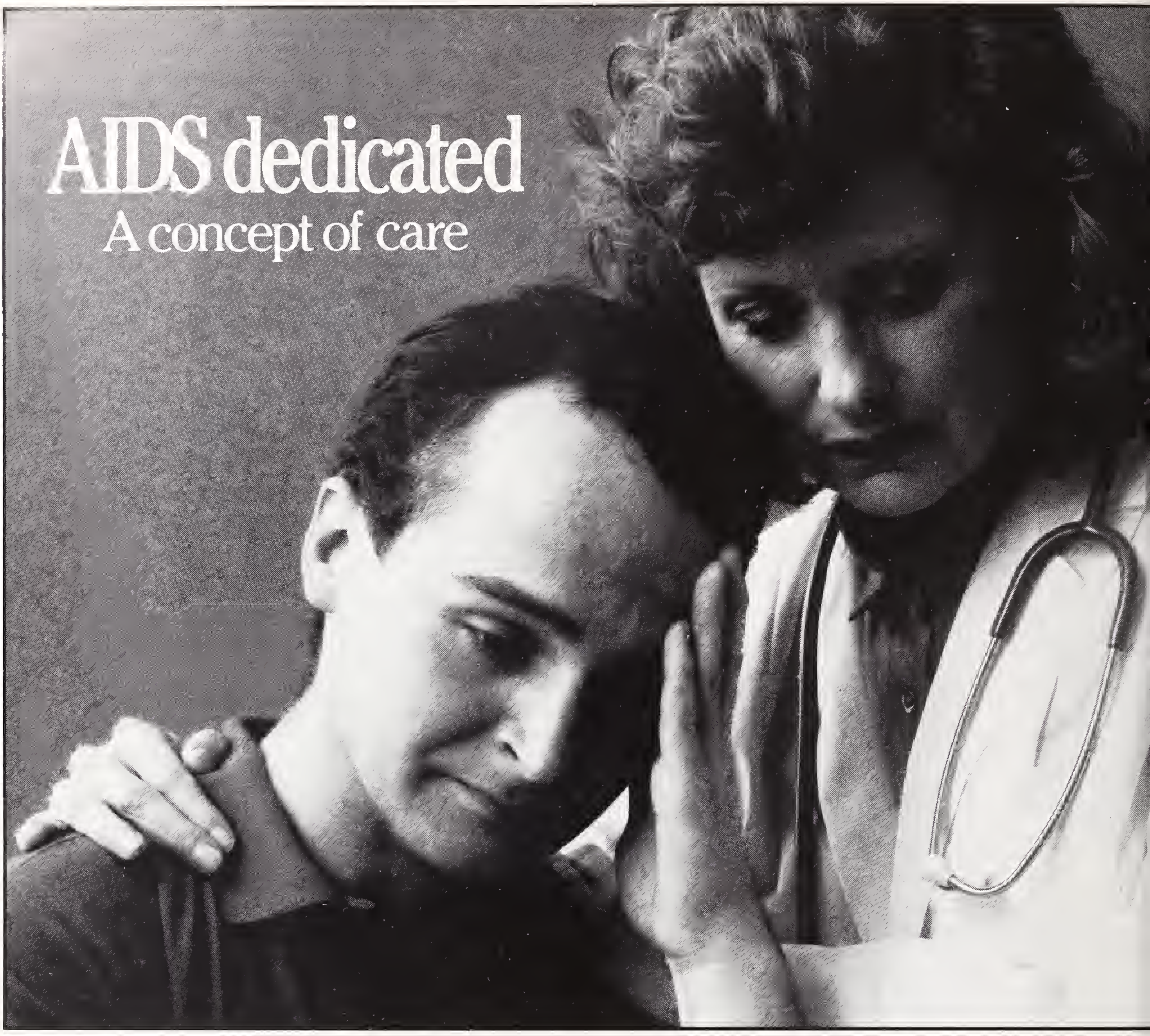

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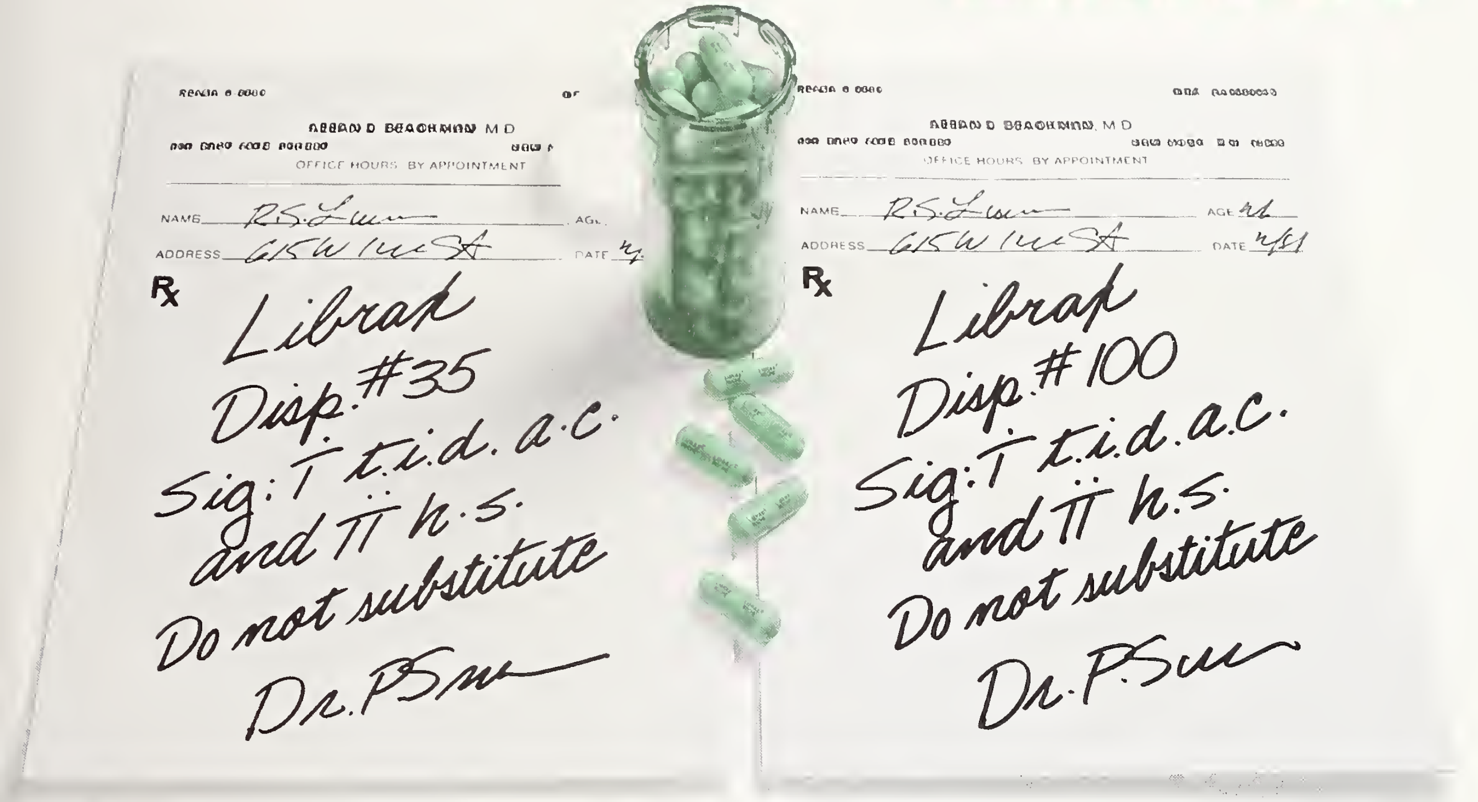

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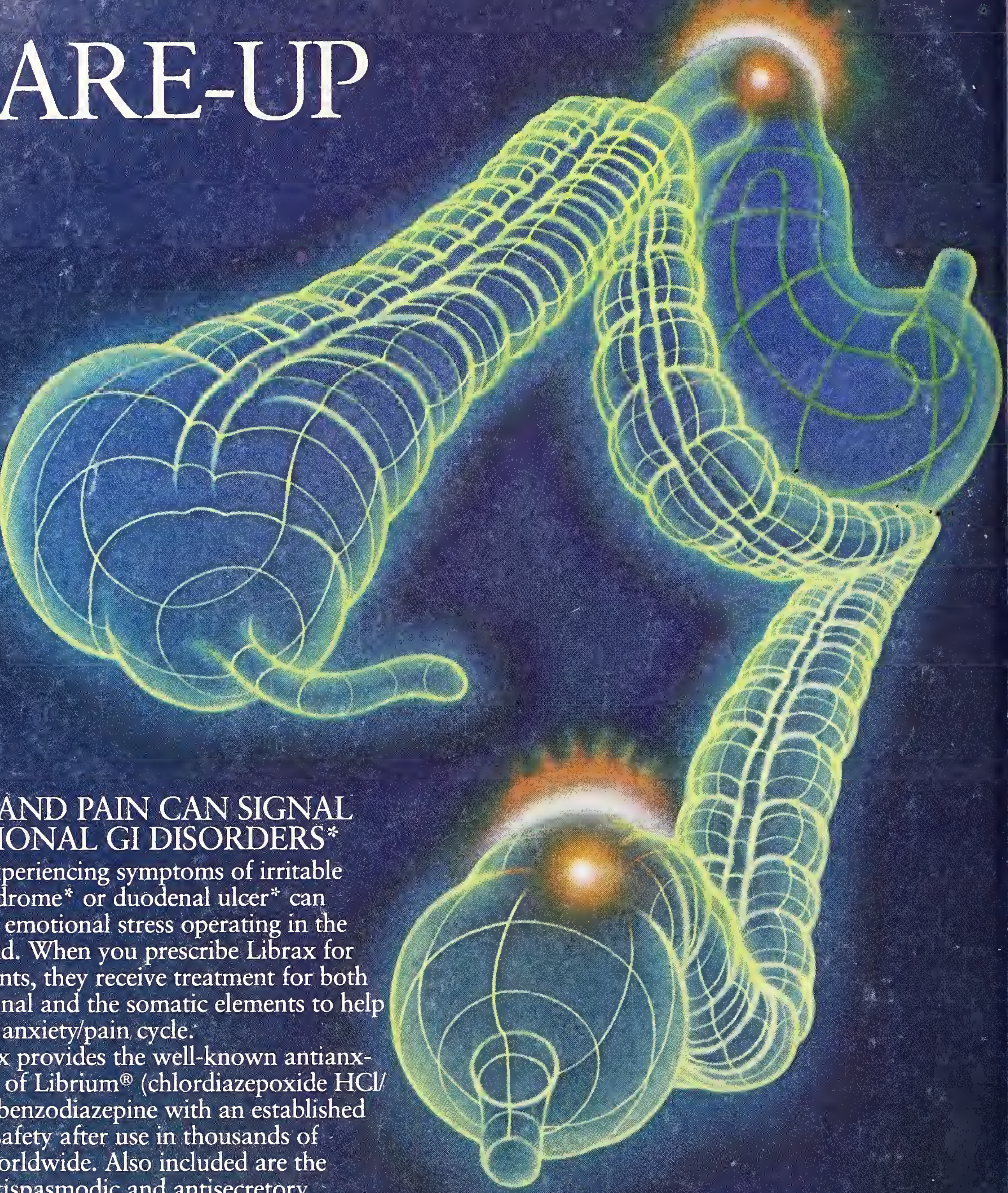

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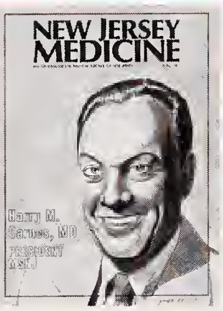

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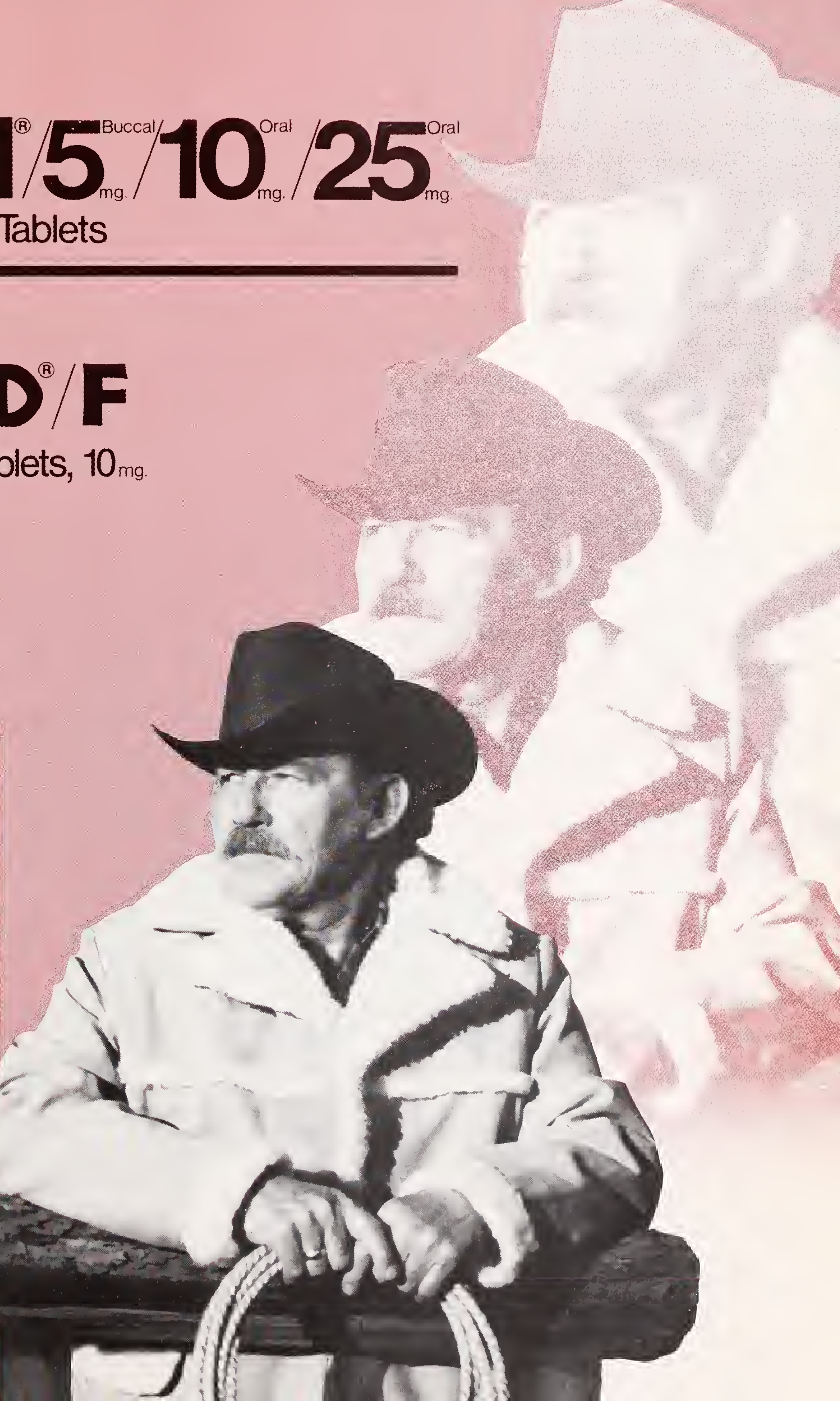

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PHYSICIAN INVOLVEMENT

Mary Ann Bartusis, M.D., a member of the Mercer County Medical Society and a practicing psychiatrist, hosts a half hour call-in talk show on WTTM, 92 AM, Trenton, on Saturday mornings between 8:30-9:00 A.M. The format includes her comments about the psychiatric aspects of the week's breaking news, answering questions from the listening audience, and giving helpful information on the subject.

SMOKING SYMPOSIUM

The joint-sponsored symposium, "Treating Tobacco Dependence," held at the MSNJ executive offices in Lawrenceville on April 8, 1987, was such a success that tapes of the lectures were requested. They may be procured from Conference Copy Incorporated, 204 Avenue M, Brooklyn, NY 11230, (718) 627-9212.

GEARING UP FOR RETIREMENT

The AMA's "Gearing Up for Retirement" workshop is designed for physicians and their spouses who are thinking about retirement. This informative, one-day workshop covers topics including valuing a practice for sale, notifying patients, postretirement opportunities, financial concerns, and more. The workshop is conducted by staff of the AMA's Department of Practice Management. This one-day workshop will start at 9:00 A.M. and conclude at 5:00 P.M. on June 26, 1987, in Atlantic City. Fee is $275 for members, $330 for nonmembers, and includes refreshment breaks and workshop materials. Spouses are free.

To register, or for more information, call the AMA Practice Management Registrar collect at (312) 645-4958, or write to the American Medical Association Department of Practice Management, 535 N. Dearborn Street, Chicago, IL 60610.

NO TO ABORTION, SURROGATE PARENTS

(Reprinted with permission of Claude Lewis and *The Philadelphia Inquirer*)

So much controversy has been raging concerning abortions—and surrogate motherhood—that I have purposefully not written about it for some time. I wondered whether, if I spent some time listening and thinking about all the noise being made concerning these issues, I might find that my previous stands were too severe.

But despite all the arguments, I find myself more wedded to my position against abortions and surrogate mothering than ever.

People often argue that a woman has the right to do whatever she wants with her body. They insist her decision about whether she'll protect, abort, or sell her baby is her business alone.

I reject that notion. If he's involved and willing to accept his responsibility for the child, it is proper that the child's father not be excluded in any decision affecting the baby's future. Surrogate mothering, especially where two families are involved, defiles the entire concept of "family."

Abortions, in my view, remain a violation of an individual's natural right to live. Except in instances that threaten the mental or physical health of the mother so severely that there can scarcely be another choice, no one has the right to destroy a fetus.

Even today, many insist a fetus is not a baby. They argue that while a fetus is life, it is not a human being. What I find so offensive is the casual use of abortions as a form of birth control. The best birth control is self-control, not abortions. It is scandalous that the lives of more than a million children—in America alone—are snuffed out each year by people who insist they possess high regard for the "sanctity of life."

Whenever I engage in discussion concerning this issue, I am met with the argument that a fetus may be life but it is not a human being. That is the precise argument many Americans once used to justify the murders of slaves.

The fact that the fetus is 100 percent dependent upon its mother provides some with the argument that it is a "parasite." Others argue that the fetus is "imposing" itself on another human being.

But the baby doesn't "impose" itself on its mother. It seems to me the mother—and father—created the life and should be responsible for its health and protection.

I have never been provided a satisfactory answer to the question, if it is not a human being, how is it that after 3½ weeks after conception, the embryo has the beginnings of eyes, spinal cord, nervous system, thyroid, glands, lungs, stomach, liver, kidney, and intestines? On the 18th day, its heart starts beating, and its arms are already taking shape.

After only four weeks—before most women even know they're pregnant—there is a forebrain. As the second month of life gets under way, the embryo has developed a retina and the fingers have reached the first joint. At six weeks all the internal organs of an adult are in various stages of development.

The embryo has a mouth with lips, the beginning of a tongue, and buds for 20 milk teeth. Its sex and reproductive organs have begun to form.

By eight weeks, the embryo becomes a fetus, a Latin word for "young one." It is at this point that the first real bone cells form. At 11 weeks, all the body systems are at work. Nerves and muscles are synchronizing with the young bones so that the arms and legs can make their initial movements.

At 18 weeks a fetus has vocal cords, but without air it can't make a sound.

It would appear to me that the fetus is very much a human being, with rights as valid as those of its parents.

Some years ago I visited the first floor exhibit at the Smithsonian Institution of fetuses at various stages of development. Although they are only inches long, I defy anyone to look at them and insist that before their deaths they were not human beings.

To those who argue that "neither the church nor state will any longer control a woman's body," let me respectfully suggest that if a woman and her mate refuse to control their bodies, someone should. Life should not be destroyed simply because some refuse to accept their responsibilities.

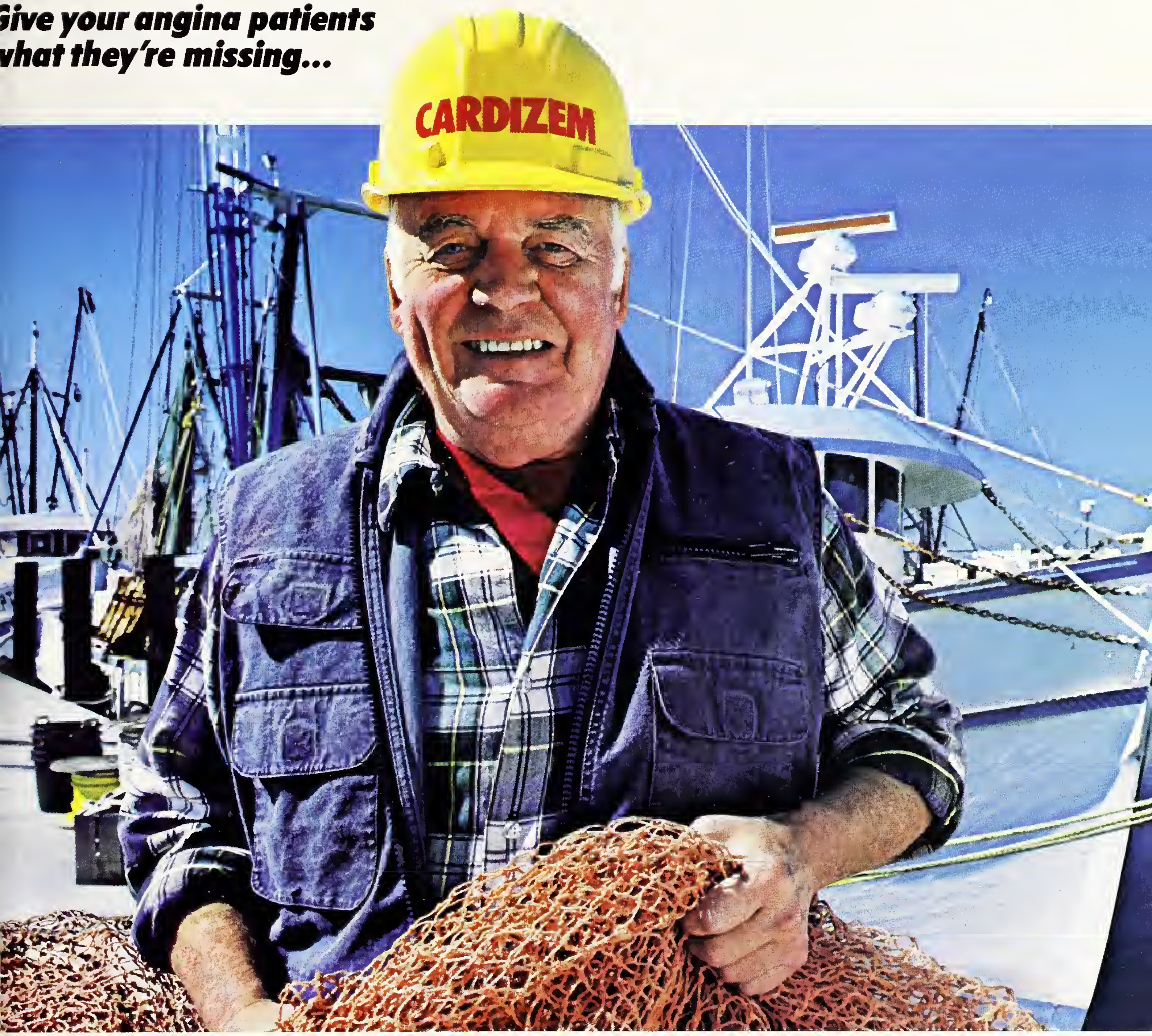
It might sound pious or parochial to suggest that women should control their bodies before they become pregnant. It is not. There are means and methods to avoid the creation of life. There is a need for greater emphasis on avoiding pregnancy.

Now we are slipping into surrogate motherhood—babies for sale to those with the cash. We are creating a Pandora's box with new medical, scientific, and social technology, surrounding babies.

Selling babies or eliminating them are cruel and simplistic solutions to complex problems. No amount of rationalization can change the fact that abortion is the destruction of human life. And paying someone to carry a child to full term imposes problems on many newborns that all of us will grow to regret.

I belong to no organized religion, but I continue to find it a specious argument that a tiny life is not a human life. Those who argue this view would probably insist that a crumb is not bread simply because it is not the whole loaf.

ive your angina patients
hat they're missing...



CARDIZEM®: FEW SIDE EFFECTS
iltiazem HCl/Marion

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

- **Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate**
- **Proven efficacy when used alone in angina[1]**
- **Compatible with other antianginals[2,3*]**
- **A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]**

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM®
diltiazem HCl/Marion

FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing.

References: 1. Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347. **2.** Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159. **3.** Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687. **4.** Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. **5.** Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.

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MARION
LABORATORIES, INC.
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PROFESSIONAL LIABILITY COMMENTARY*

The Health Care Quality Improvement Act of 1986

Two major features of the Health Quality Improvement Act of 1986 affect physicians and hospitals.

The Health Care Quality Improvement Act of 1986 has two major features of significance to physicians and hospitals. The first grants immunity from certain damage actions for those who conduct peer review in accordance with the requirements of the Act. The second requires the reporting of information on malpractice payments and certain disciplinary actions to the Secretary of Health and Human Services (HHS) or to an entity designated by the Secretary. It further requires hospitals to obtain this information when they consider credentialing any physician or licensed health care practitioner.

I. PEER REVIEW IMMUNITY

A. Extent of Immunity

Part of the Act is based on a finding by Congress that "(t)here is an overriding national need to provide incentive and protection for physicians engaging in effective professional peer review." It provides that no person who takes, or assists in taking, "a professional review action" that meets certain standards shall be held liable in private damage actions under any federal or state law other than civil rights laws. The term "professional review action" includes any peer review action or recommendation based on the competence or professional conduct of a physician and which might affect the physician's clinical privileges or membership in a professional society. An action is deemed not based on competence or professional conduct if, among other things, it is based primarily on the physician's fees, advertising, or association with a particular health care delivery mechanism or with a particular class of practitioners.

In addition, the Act gives immunity to a person who furnishes information to a professional review body regarding the competence or professional conduct of a physician unless the person knew that the information was false. The Act does not, however, provide confidentiality for such information. Thus, while an individual can furnish information without fear of legal liability, that individual cannot be sure that the information will not become known to the physician under review—with whatever practical consequences that disclosure might have.

The scope of the immunity should be clearly understood. Initially, no immunity is given with respect to peer review involving nonphysicians, e.g., credentialing of podiatrists, nurse-midwives. Moreover, no immunity is granted from actions seeking injunctive relief, from antitrust actions brought by government, or from actions alleging violations of a civil rights law, e.g., age or sex discrimination statutes. Finally, a state may "opt out" of the Act by legislation.

While limited, the immunity conferred by the Act can be quite significant. In states that do not opt out, it minimizes the exposure to damage awards under both the antitrust laws and the state defamation laws in actions by physicians whose staff privileges or medical society memberships have been denied or restricted based on their competence or professional conduct. Antitrust and defamation action brought by such physicians pose the greatest threat to the peer review process. Accordingly, hospitals, HMOs, medical staffs, and medical societies are well advised to bring their peer review activities within the immunity provisions of the Act.

Further, a defendant who substantially prevails is entitled to costs and attorneys' fees if plaintiff's claim was "frivolous, unreasonable, without foundation, or in bad faith." The Act does not define these terms. However, in view of the "overriding national need to provide incentive and protection for physicians engaging in effective professional peer review," the term "unreasonable" should be defined liberally to permit the award of attorneys' fees as often as possible.

In this respect, it should be noted that a defendant cannot be deemed to prevail if the plaintiff is awarded injunctive relief. This result is incongruous inasmuch as the Act does not afford any immunity from injunctive actions. Precisely how the Act will be interpreted remains to be seen.

B. Standards for Acquiring Immunity

As noted above, immunity will attach to a "professional review action" only if that action meets certain standards. Specifically, the action must be taken:

1. In the reasonable belief that it furthered quality health care;
2. After a reasonable effort to obtain relevant facts;
3. After "adequate notice and hearing procedures are afforded to the physician involved or after such other procedures as are fair to the physician under the circumstances;" and

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*This item from the Department of Professional Liability Control, MSNJ, was prepared by James E. George, M.D., J.D., and A. Ronald Rouse, who are the Director of the Department and the Director of Special Projects, respectively.

4. In the reasonable belief that the action was warranted.

An action is presumed to have met these standards "unless the presumption is rebutted by a preponderance of the evidence."

The first, second, and fourth standards are straightforward. To qualify for immunity, members of a professional review body should (a) reasonably believe that their action was designed to further quality care, (b) make a reasonable effort to obtain relevant facts, and (c) satisfy themselves that their action was warranted by these facts. The third standard is less clear, however. It allows the professional review body to afford either "adequate notice and hearing procedures" specified in the Act or "such other procedures as are fair...." In effect, the third standard creates a "safe harbor" if "adequate notice and hearing procedures" are followed but also gives immunity if alternative procedures are judged to be "fair" in a given case.

1. "Adequate Notice and Hearing Procedures"

The "adequate notice and hearing procedures" set forth in the Act are quite extensive. Unless voluntarily waived by the physician under review, they include the following:

1. Notice to the physician setting forth the proposed action against the physician, the reasons for that action, and the fact that the physician may request a hearing;
2. If the physician requests a hearing, a separate notice setting forth the time and place of the hearing and a list of witnesses; and
3. A hearing, within 30 days after the second notice, to be held before a mutually acceptable arbitrator or before a hearing officer or panel of individuals "not in direct economic competition with the physician involved."

The phrase "in direct economic competition with the physician involved" is not defined and raises several questions. For example, is an orthopedic surgeon "in direct economic competition" with a neurosurgeon or a general surgeon? Is an ophthalmologist "in direct economic competition" with another ophthalmologist who practices in a different part of the same city? Whatever the answer turns out to be, it seems wise at a minimum to exclude from a professional review body any practitioner who practices the same specialty in the same geographic areas as the physician under review.

The Act specifies numerous rights that a physician must be given at the hearing if the requirements of "adequate notice and hearing" are to be satisfied. In particular, the physician is to have the right:

1. To be represented by an attorney or other representative;
2. To have a record of the proceedings made and to obtain a copy of the record upon payment of a reasonable charge;
3. To call, examine, and cross-examine witnesses;
4. To present relevant evidence;
5. To submit a written statement at the close of the hearing;
6. To receive any written recommendation based on the hearing, including the basis for the recommendation; and
7. To receive a written final decision, including the basis for the decision.

Significantly, the "adequate notice and hearing procedures" do not apply where a restriction of clinical privileges extends for no longer than 14 days or may avoid imminent danger to the health of patients.

We believe that some of the "adequate notice and hearing procedures" spelled out in the Act may be inappropriate in certain circumstances. Imposition of these procedures takes no account of the distinction between initial applicants for staff privileges and incumbent physicians whose privileges are being restricted or revoked. Affording every initial applicant all the procedures set forth in the Act would undercut the effective processing of applications. Not surprisingly, therefore, few, if any, states require this degree of due process for initial applicants.

2. Other "Fair" Procedures

Many institutions will not want to give the "adequate notice and hearing procedures" specified in the Act—at least where initial applicants are concerned. In this connection, it must be remembered that these procedures represent a safe harbor. Those associated with a "professional review action" will still be immunized if they provide "such other procedures as are fair to the physician under the circumstances." Notably, the Act explicitly states that failure to provide "adequate notice and hearing procedures" does not "in itself" constitute noncompliance with the standards for immunity.

Consequently, hospitals and medical societies that do not wish to afford all the due process encompassed with the "adequate notice and hearing procedures" should formulate a written policy specifying the procedures that they regard as fair in various peer review contexts. These procedures can be based upon JCAH standards, state law requirements, or other authorities. But the important point is to develop a written list of procedures that will be fairly applied whenever applicable. The existence of such a list, adopted after reasonable deliberation, will help to demonstrate that the procedures followed in any individual case were fair.

C. Effective Date

With respect to immunity from damage actions under federal statutes, the Act is already effective. For actions under state law, the Act grants immunity only for professional review actions commenced on or after October 14, 1989. A state, however, may elect by legislation to have the immunity provisions apply earlier. Conversely, as noted above, it may enact legislation precluding the immunity provisions affecting its laws.

As a practical matter, therefore, the full impact of the immunity provisions will not be felt until October 14, 1989. This is because the immunity from damage actions under federal law is of little value to the extent that plaintiffs are able to bring virtually identical actions in litigation based on state law. Consequently, interested providers and medical societies might consider asking the state to opt into the immunity provisions of the Act prior to October 14, 1989.

II. REPORTING OF INFORMATION

Part B of the Act is predicated upon the finding by Congress that "(t)he increasing occurrence of medical malpractice and the need to improve the quality of medical care have become nationwide problems that warrant greater efforts than those that can be undertaken by any individual state." To address these problems, Congress has adopted a series of reporting requirements. While Part A applies only to physicians, Part B extends to nonphysicians as well. Its reporting requirements will become effective when the Secretary of HHS issues regulations—but in no event later than October 1987.

A. Reporting by Insurers

Any entity which makes a payment in settlement of a malpractice claim or in satisfaction of a malpractice judgment must report the payment both to the Secretary of HHS or his designee and to the State Licensure Board. The report must include the name of the practitioner involved, the amount of the payment, the name of any hospital with which the practitioner is associated, a description of the incident, and any other information that the Secretary deems appropriate. This requirement extends not only to insurance companies but also to risk retention groups, those who self-insure, and any other entity which makes a malpractice payment. Any entity that fails to comply is subject to a penalty of up $10,000 per violation.

Whatever one may think about the wisdom of reporting malpractice payments, we believe that the failure to exempt payments under a specified minimum, e.g., $50,000, is ill-advised. It discourages settlements of malpractice cases because any monetary settlement, no matter how small, must be reported. Moreover, to the extent that small settlements tend not to be indicative of a practitioner's competence, the Act creates a record that may be more misleading than informative. Although the Act directs the Secretary to report to Congress within two years on whether information on small payments should be required, the answer to this question seems apparent without extensive study.

B. Reporting by State Medical Boards

The State Medical Board must report to the Secretary of HHS or his designee any of its actions which disciplines or reprimands a physician for reasons relating to the physician's competence or professional conduct. It also must report any surrender of medical license. The report must contain the name of the physician involved, a description of the reasons for disciplinary action or surrender of license, and any other information required by the Secretary.

C. Reporting by Providers and Professional Societies

Any hospital, HMO, or other provider that restricts the clinical privileges of a physician for longer than 30 days or that accepts the surrender of privileges while the physician is under investigation must report its action to the State Medical Board. Similarly, any medical society which takes an action adversely affecting the physician's membership also must report the action to the Board. A provider or association that does not make the required reports is subject to loss of the immunity otherwise conferred by Part A.

In addition, a provider or professional society may report disciplinary actions against nonphysicians to the appropriate State Licensure Board. Both for mandatory and discretionary reports, the State Board must provide the reported information to the Secretary or his designee. It also must report known instances of failure by a provider or association to report required information.

D. Duty of Hospitals to Obtain Information

Upon any initial application for staff privileges and at least once every two years for incumbent staff members, each hospital must obtain any information that has been reported on the practitioner under review. In a malpractice action against it, a hospital which does not obtain this information is presumed to have knowledge of it. Conversely, the hospital may rely upon this information unless it knew that the information was false.

For some reason, this requirement applies only to hospitals—not to professional societies, HMOs, or others. However, these other entities may request reported information prior to or after entering into a relationship with the practitioner. As long as it is available, liability considerations suggest that an entity which engages in credentialing should attempt to obtain this information.

E. Miscellaneous

The Secretary is directed to issue regulations (a) providing for disclosure of reported information to the practitioner in question and (b) establishing procedures for the physician to dispute the accuracy of the information. Information reported pursuant to the Act is to be kept confidential except that it is to be disclosed with respect to any professional review activity or malpractice action involving the practitioner. Clearly, this is not much of a confidentiality provision.

III. CHECKLIST FOR PROVIDERS AND PROFESSIONAL ASSOCIATIONS

The Health Care Quality Improvement Act of 1986 suggests several steps that providers, medical staffs, and professional associations should consider:

1. Adopt written peer review procedures that will allow those involved in peer review to come within the immunity provisions of the Act;
2. Establish procedures for the reporting of malpractice payments (in the case of self-insured hospitals), actions adversely affecting medical staff privileges, and disciplinary actions (in the case of professional societies); and
3. Establish procedures for obtaining reported information in connection with the credentialing process.

In addition, all health care entities will want to consider carefully how the Act specifically affects them. Jack R. Bierig (Sidley & Austin Health Law Report, Vol. Three, Number One, February 1987)

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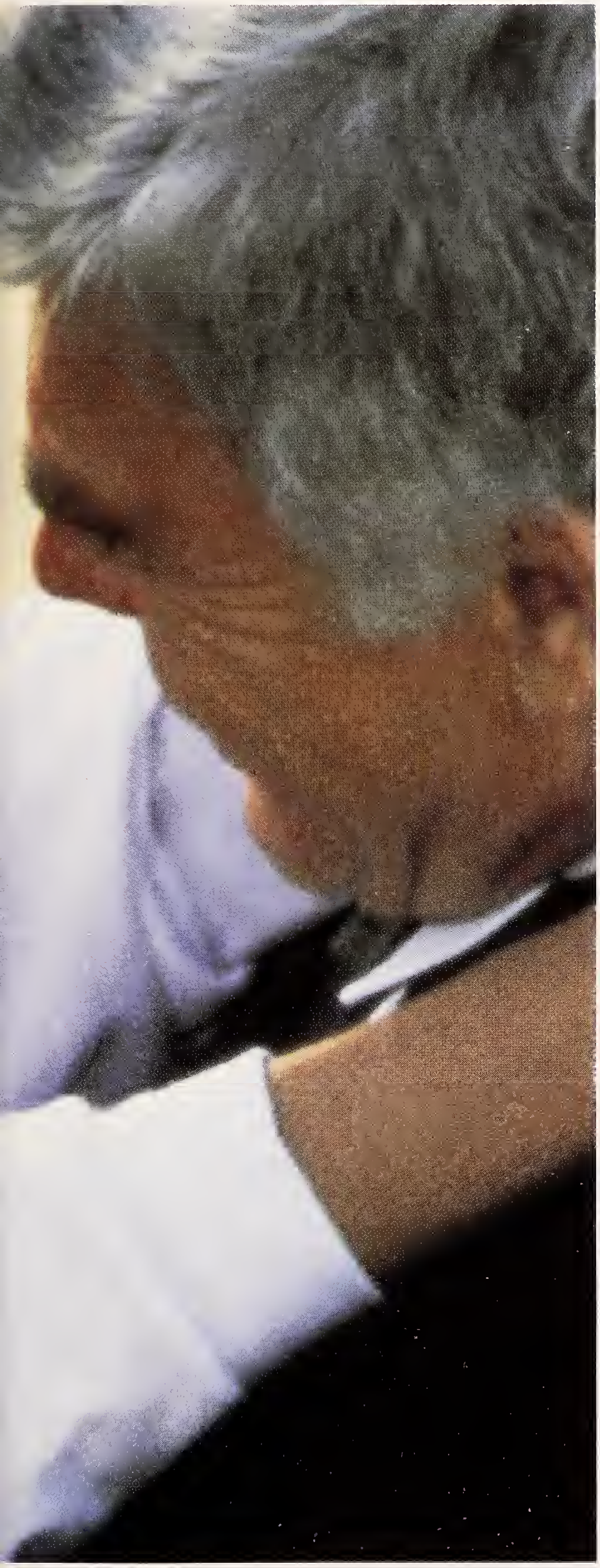

Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis[1] and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

PREMARIN®
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN®
(conjugated estrogens tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(conjugated estrogens)

Vaginal Cream
0.625 mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTEO TO INCREASE THE RISK OF ENOOMETRIAL CARCINOMA.
Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.
2. ESTROGENS SHOULO NOT BE USEO OURING PREGNANCY.
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.
INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY ANO ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).
Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.
CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).
WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.
PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potentia risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Oecreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens
ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache migraine, dizziness, mental depression, chorea, increase or decrease in weight; reduced carbohydrate tolerance aggravation of porphyria; edema; changes in libido.
ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.
DOSAGE AND ADMINISTRATION:
PREMARIN® Brand of conjugated estrogens tablets, USP
1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
2. *Given cyclically:* Osteoporosis. Female castration. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding
PREMARIN® Brand of conjugated estrogens Vaginal Cream
Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.
References:
1. Lindsay R, Hart OM, Clark OM: The minimum effective dose of estrogen for prevention of postmenopausa bone loss. *Obstet Gynecol* 1984;63:759-763. **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetto N Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause.* Lancaster, England, MTP Press Ltd, 1980 chap 13.

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INAUGURAL ADDRESS

HARRY M. CARNES, M.D., AUDUBON

Harry M. Carnes, M.D., presented this Address at his inauguration on May 1, 1987, at the Annual Meeting of the Medical Society of New Jersey, at Americana Host Farm Resort, Lancaster, Pennsylvania.

I am appearing before you today in the same role my predecessors have for 194 years—desirous of perpetuating the good of this Society, and promising diligent effort on my part to that end. Furthermore, I am challenging every delegate to assume the leadership position in each local area. If you feel you are unable to fulfill your responsibilities, pass the baton to another. I do not think I am overstating the case by suggesting that the best efforts of every person in this room are needed to achieve our goal—that goal being the finest health care available anywhere for every citizen of New Jersey.

Having spoken in generalities, let's get specific. In an attempt to maintain the external momentum of the Society, we must strengthen ourselves internally. The issue of membership must be actively addressed. This is foremost in my priorities, just as it was for Edward Schauer, M.D., last year. I want to emphasize our financial status. As the current chairman of the Finance and Budget Committee, I can tell you that we operate by the "seat of our pants." At a time when physician supply is practically growing wild, our membership rolls are, and have been, static for several years. In order to maintain our position as spokesman for organized medicine within the state, we need—indeed we must have—increased membership.

We have less than adequate numbers of young, minority, and female physicians. The largest constituency that we have not garnered consists of women physicians of New Jersey. Somehow, through the grassroots, we must get the message across that we need them in our organization and they need us. We are crying for women leaders. They comprise 40 percent of medical school classes. It is obvious that we cannot long remain healthy without their participation. Far more than money, they could bring their thoughts and their innovative ideas to this Society, for the betterment of everyone.

New Jersey is very fortunate to have one of the foremost female leaders in medicine today—in Palma Formica, M.D. I shall appoint an ad hoc committee with the President-Elect as chairman. The charge to the committee will be to set up workshops throughout the state, to assist and monitor county membership committees in this drive to recruit new members, and to report results to the Board of Trustees at three-month intervals. This will be a "crash course." Ad hoc committees appointed by a President coincide with the term of the presidency. We won't have much time, but we have strong leadership—and I expect excellent results.

There have been marked changes in medicine in the past 20 years. (Now, there is a profound statement!) We were introduced to Medicare in the early 1960s; those of my generation have known the years of plenty, with "cost plus" and "usual and customary" fees. During this period, there was an explosion in high technology, and some serious miscalculations by the government

The very heart, the very soul of medicine is service. It is through working hard and selflessly serving others that we will accomplish our goals.

on the utilization of their programs. Everything was going fine until the bills came due. The politicians had promised more than they could deliver. Then they did an unusual thing: they transferred as much of the liability as they could to someone else—in this case, the providers of health care. With the resultant increase in health care costs, physicians now have increased financial liability in the health care system.

This little trick was performed in several ways. We are experiencing: 1) the DRG payment system (first it was hospitals, now it is proposed for physicians); 2) peer review organizations; 3) frozen fee syndrome—we had that for several years; 4) the ever-popular HMOs, PPOs, etc.—about which I will comment briefly later; 5) and—the next onslaught by government is being ushered in by mandatory assignment laws. It is sad that this legislation could result in a two-tiered system of medical care for our senior citizens, the very same people the politicians state they are trying to help. The reason given for enactment of Medicare legislation was to give all senior citizens equal access to the same high-quality medical care. Now, in an effort to regulate physician fees, they would place this level of care in jeopardy. It would appear to be an arrogant attempt by legislators to pander to voters.

Most of us are conservative by nature. We cannot, however, allow this fact to cloud our judgment. This present federal administration (you could include state) along with the Democratic Congress, has done more to dismantle the medical profession than the Wilbur Cohens and the Ed Califanos ever achieved. "Let us not be lulled to sleep by the security blanket of the Reagan Administration." These are words I wrote as President of Camden County Medical Society in 1983. Those words are just as meaningful today.

It is truly ironic that in this uncontrolled competitive environment there is perceived to be such a need to control our medical profession. I previously mentioned several overt ways this is being accomplished. One subtle way to attain control that I have not discussed is the HMO—IPA—PPO.

Let me set the record straight. The Medical Society of New Jersey has stated it stands for the pluralistic delivery of medical care in our state. The AMA has gone on record for the same at the national level. I, as president of this 10,000-plus member organization, shall support that stand.

The leadership of this Society sees a bias within the HMO-IPA systems. We want a level playing field for all players. This bias is exemplified in the federal law which forces any employer of over 25 employees to offer an HMO plan; no mention is made of forced offering of fee-for-service insurance to employees. Bylaws that permit exclusion of physicians on the basis of members of a particular specialty alone are wrong. Bylaws that make it mandatory for a physician to care for a patient in the hospital in order to be eligible for membership are wrong.

The courts of New Jersey do not permit hospitals to place such restrictive barriers on membership. Why, then, should HMOs—who in actuality are insurance companies licensed by the state—be permitted to perpetrate these injustices? The license to practice medicine in New Jersey is a privilege granted by the state to qualified individuals. That license, thus granted, should permit the licensee complete access to the health care system of the state. He or she should be able to care for any patient within New Jersey and be compensated by the patient's insurance company. For it to be otherwise—for the physician to be excluded—is a violation in restraint of trade. We, therefore, have introduced legislation to address this problem, to allow the patient the freedom to choose his own doctor. That is the primary tenet on which the private practice of medicine is based—and we appeal for the support of this legislation by all members.

Medicine faces a myriad of problems today—that is no secret. The physician frustration level is at an all-time high—that is no secret. We are under siege from every side. Our position is untenable. Within the hospital, we must manage our sick patient in a cost-effective manner, adhering to constraints of a particular time frame (DRG). Translated, we must order every test that we and/or The PRO deem necessary—but not one more. Speaking retroactively, The PRO has cornered the market on quality recently. (It's amazing what we can do with federal money!) While we are accomplishing these, we must protect ourselves from unforeseen patient complications. The threat of medical liability, with resultant legal action, is ever with us.

The fact that patients, particularly the elderly, are leaving the hospital "quicker and sicker" is known by all; yet no definitive action has been taken to alleviate these serious problems. Many patients are not sick enough to receive the intensive medical care given in a hospital—but those same patients are too sick to be anywhere else. Maybe the word "compassion" should be reintroduced to the bureaucratic language. Occasionally, one wonders about the true mission of hospitals in our society.

Medicine today, despite the recent advances in high technology, remains art and science. It is not and never has been a pure science. Thus, we do not deal in black and white issues; there are gray areas, and individual judgment is required. We shall always strive for perfection (not mediocrity) as our goal—knowing that the achievement of same is impossible. These thoughts can lay the foundation for the message we must deliver throughout the state. We need not apologize: the message is accurate and in no way self-serving.

In conclusion, I would like to make some general comments on the state of the profession:

Change is the order of the day; however, with change comes the opportunity to shape these events to the ultimate benefit of our patients' needs; thus, our legislative proposals. This is our great challenge. The battle will demand the best in all of us.

It is trite to say we must all become involved. I think it is much better to use the powerful words of Oliver Wendell Holmes, Jr., who stated: "As life is action and passion, it is required of a man that he should share the passion and action of his time—at peril of being judged not to have lived."

Despite the problems that face us all, despite the turmoil, even chaos, surrounding us—we must stand fast. Now is no time to cut and run, but instead to return to basics. In spite of all its great advances, what medicine is still all about is the patient, the physician, and the quality of the relationship which exists between them.

Yes, ladies and gentlemen, we must stand fast and remain true to our highest ideals. The very heart, the very soul, of medicine is service. It is in working hard and selflessly serving others that we shall accomplish our goals and preserve our freedom.

I thank each of you for permitting me to serve in this, your highest office. I shall strive vigorously to reward your trust. Let's all live our professional lives so as to bring honor to medicine—as medicine has so honored us.

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FAREWELL ADDRESS

EDWARD A. SCHAUER, M.D., FARMINGDALE

Edward A. Schauer, M.D., presented this Address at the Annual Meeting of the Medical Society of New Jersey at Americana Host Farm Resort, Lancaster, Pennsylvania on May 1, 1987.

Another year has gone by, and we are approaching our 221st year of activity. As usual, the days slip by quickly and Father Time waits for no man, woman, or physician.

One of my joys of medical politics always has been acting as a spokesman; and indeed, I have tried my best to be your representative and advocate with the Board, at the Interim Meeting in November 1986, at county meetings, at medical staff meetings, at neighboring state affairs, with the State Department of Health, with the New Jersey Hospital Association, and of course, with the media. I also have had the unique opportunity to represent you in the AMA Delegation.

My main thrust has been that our greatest concern should be the care of the patient: care that should be the best we can give and should be scientifically based and personal. We should treat each patient as a person instead of a pathologic entity, and we should manage the care as though the patient were our own family member.

Our next concern should be the milieu in which we practice medicine. The best care can be rendered when the physician/patient relationship is optimal and decisions are based on the medical problem at hand without third-party interference.

For the last 20 years, there have been many attempts to alter this concept, and this interference has been and continues to be one of our greatest problems. Our government had promised too much, and as their programs began to fail, they have had to institute controls and regulations of the practice of medicine, and now are beginning to limit access to care because of the soaring costs. I remind you, my colleagues, and particularly our younger members, that in 1964-1965, organized medicine, particularly the AMA, told the legislators that the program they envisioned would be too expensive; they did not want to hear that advice.

In more recent years, corporations have decided to enter the medical field. There is no problem with this, since employees must have care, but medical decisions must be left with the physician. Unfortunately, too many times controls creep in and increase at a rather rapid rate; very soon the physician finds a host of people, usually nonmedical, looking over his/her shoulder and telling him/her how to treat patients. Some local insurance companies seem to be on the same track, and this multiplies the problem.

The other obvious and very unfortunate change in our milieu has been the liability climate. There has developed in our country the distinct feeling that no matter what occurs, there must be a definite reason and someone must be at fault. This seems to have no relationship to the kind of medicine that was practiced. As I mentioned in my inaugural address, there is definitely some medical liability in our country, and this should be properly adjudicated; however, there still are frivolous cases and some which have distorted the concept of liability. Excessive awards with no visible restraints have caused some physicians to leave practice entirely, others to retire early, and those remaining to practice excessive defensive medicine. This helps no one. The only saving grace seems to be that almost all groups now are being affected by this change in philosophy.

It would seem that doctors are expected to cure all injuries and illnesses regardless of the dictates of a Supreme Being and the limitations of the natural order.

Where do we go from here? First, we must continue to render quality care to our patients—that has to be our ongoing and ever important cornerstone. Secondly, we must do better in the legislative sphere, for this seems to be where a great deal of change in our environment of practicing good medicine arises. This activity must begin with our patients—we must take some time to educate them, inform them, alert them, and keep them up to date as to any bill, law, or regulation that affects the physician/patient relationship or, worse yet, attempts to dictate to us how we must treat them. In addition, we must keep our Legislative Council alive, active, and stronger than ever; that Council has been doing a yeoman's job on our behalf for years. They review, dissect, and discuss all bills in the legislature which relate in any fashion to the practice of medicine. All segments of our organization should be there at the table for input and guidance in reaching the best decisions. Lastly, we must be more visible in our PAC movement. Political action is one of the big players in the legislative arena. JEMPAC has done remarkably well over the years, considering the poor support that we have given it. We need to be on the firing line with our legislators, we need to communicate with our lobbyists, and above all, we need to contribute money. Our record, in comparison with other state PACs, is extremely poor. (For example, $50 a head would give JEMPAC $500,000; $100 a head would give us a war chest of $1,000,000.)

In closing, I want to thank all of you for the opportunity to serve as your President. I would like to thank Monmouth County for their support in all my endeavors over the past 30 years. My thanks go to all my family physician confreres for their consideration and advice, and in particular, thanks to the county medical societies who were so gracious to Alice and me when we visited.

I want all of you to know that the Medical Society of New Jersey will be in good hands in the next few years. I extend my sincere thanks to our officers for their help this past year. They were always ready to serve whenever needed. The Board of Trustees kept me on my toes at meetings. The councils and committees did their homework, and rendered their reports—and all of these members should be recognized for their contributions. I also want to thank the members of the Medical Society of New Jersey Auxiliary for all their fine work on our behalf—they are always doing something for us, and many times we take them for granted. In addition, I want to thank the members of the New Jersey Society of Medical Assistants for their efforts on our behalf.

I am deeply indebted to an excellent staff. The folks who work for us are very personable, courteous, kind, and ever available to proceed with our thoughts and projections. They make one feel that they are part of our family and, indeed, they are.

I wish Doctor Harry Carnes all the best in his Presidential year, and God speed him on his way. Finally, I leave you with two thoughts: one is, that only we can practice quality medicine and treat our patients with the proper care; and lastly, I want to leave some thoughts of importance for life in general, from a previous President of the United States:

- You cannot bring about prosperity by discouraging thrift.
- You cannot help small men by tearing down big men.
- You cannot strengthen the weak by weakening the strong.
- You cannot lift the wage earner by pulling down the wage payer.
- You cannot help the poor man by destroying the rich.
- You cannot keep out of trouble by spending more than your income.
- You cannot further the brotherhood of man by inciting class hatred.
- You cannot establish security on borrowed money.
- You cannot build character and courage by taking away man's initiative and independence.
- You cannot help men permanently by doing for them what they could and should do for themselves.

Autism Outreach

In the state of New Jersey there are over 10,000 citizens with autism. The **Autism Outreach Project** offers a variety of free services in an effort to meet the needs of children and adults with autism, their families, and the professionals who serve them.

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Autism is a lifelong developmental disability that appears during the first three years of life. It is four times more common in males than females and crosses racial, ethnic, and socio-economic lines. No known factors in the psychological environment of a child have been shown to cause autism. Autism is characterized by severe behavior, communication, and perceptually-based learning problems, and affects 4-15 of every 10,000 births.

For additional information or to request services, contact the **Autism Outreach Project** *office nearest you.*

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609/429-0010

Autism Outreach Project
at COSAC
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Lawrenceville, NJ 08648
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MSNJ AUXILIARY

Sally Lou Ilagan is the 61st President of the Medical Society of New Jersey Auxiliary.

The 61st President of the Medical Society of New Jersey Auxiliary brings to her newest office many years of service in the allied health professions as well as a wide variety of life experiences.

Sally Lou Ilagan began her odyssey in Edwardsville, Pennsylvania, where she was born, raised, and completed her primary and secondary education. After high school, Sally set out for Paterson General Hospital School of Nursing; once graduated, she remained at her alma mater to further hone her skills in the operating room.

Armed with her R.N. degree and comfortable with her nursing specialty, Sally then sought to broaden her horizons at Morristown Memorial Hospital. It was there that she met and married Leonardo (Ding) A. Ilagan, M.D., her husband of 28 years.

For the next several years Ding and Sally followed the "residency trail" which took them from Morristown to Hahnemann Hospital in Philadelphia, Pennsylvania, and then to Newfoundland, Canada.

In 1965, the decision was made to set down roots in Camden County, where Ding began his practice in anesthesiology at Cooper Hospital. Sally, with her nursing career on hold, proceeded to establish a strong home base for the family which included three children—Gregg, Lee Marie, and Marc. Both Ding and Sally wisely recognized the need to be contributing members in the Medical Society community and eagerly joined the component society in Camden County.

In her first full year as a member of the Camden County Auxiliary, 1970-1971, Sally served as Courtesy Chairman. During the following three years she served as Vice-Chairman and Chairman of Hospitality and Gourmet Chairman.

By 1973, Ding had accepted a position at Burlington County Memorial Hospital. Although the home base remained in Cherry Hill, the professional base shifted to Burlington County.

Sally plunged right into the mainstream of the Burlington County Medical Society Auxiliary. Along with her experience, she brought a great deal of energy and by 1976 was elected First-Vice President. At the state level, her service went into high gear in 1977-1978 as she was elected to the Nominating Committee, served as State C.P.R. Chairman, and attended Confluence as Burlington County's President-Elect. In 1978-1979, while President of Burlington County, she continued to serve as State C.P.R. Chairman and attended Confluence a second time.

At the county level Sally has continued to be an active supporter, filling roles both in an advisory capacity and in committee chairmanships.

For the Medical Society of New Jersey Auxiliary, Sally has filled many positions: Chairman of Widows and Orphans, 1979-1980; Nominating Committee and Vice-Chairman AMA-ERF, 1980-1981; Chairman AMA-ERF, 1981-1982; Treasurer, 1982-1984; Recording Secretary, 1984-1985; Vice-President, 1985-1986; President-Elect, 1986-1987.

Her auxiliary skills have been enhanced through two additional years at Confluence and attendance at National Conventions in six of the last seven years.

Although her auxiliary accomplishments have been numerous, our new President has found time along the way to involve herself in many other activities.

As mother of three children, Sally found the energy to serve in the Parent-Teacher Association for the Cherry Hill School District. She has helped with fundraising at Moorestown Friends School and served as a Swimming-Diving Judge in the Tri-County Swimming and Diving Association.

Additional personal formal educational experiences include attendance at Camden County Community College and membership in the Garden State Chapter and the National Association of Parliamentarians.

Sally also is an avid bowler and continues to serve as a bowling league president. She also enjoys sewing, needlework, reading, cooking, and swimming.

An avowed "people person," our 1987-1988 President plans to direct her energies and skills toward a primary goal: "to persuade every physician's spouse that membership in the federation of county, state, and AMA auxiliaries is essential for implementing effective legislation against government intervention in the practice of quality medical care."

In mild to moderate hypertension

THE FIRST ONCE DAILY CALCIUM CHANNEL BLOCKER...

NEW
ONCE DAILY

ISOPTIN® SR*

(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets

JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

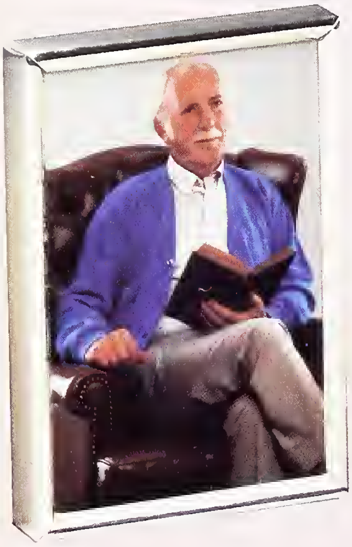
- Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
- Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
- Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
- Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN does not cause urinary urgency.
- Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
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Please see adjacent page for brief summary.

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Brief Summary

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CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

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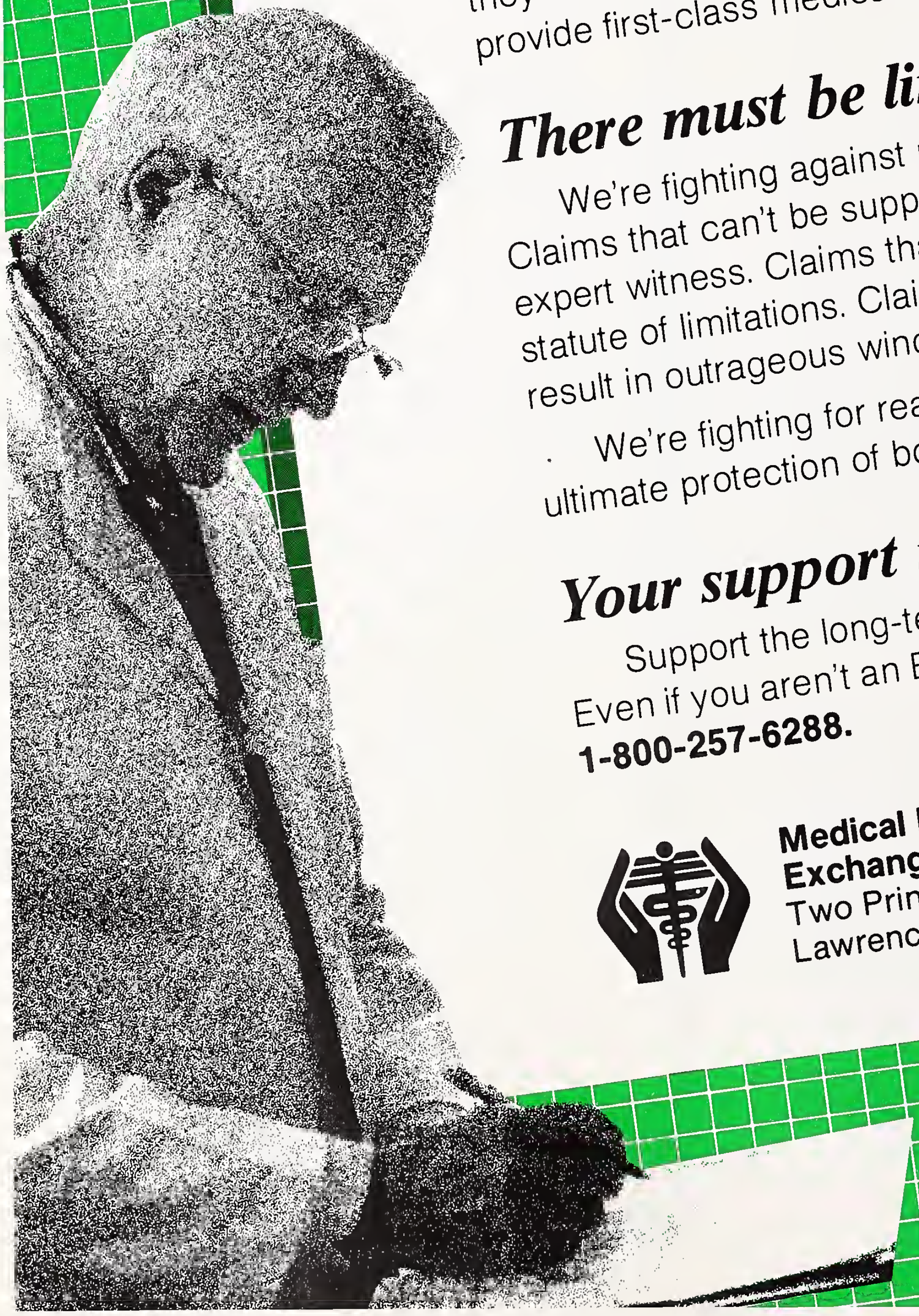

ACADEMIC HEALTH CENTERS: SURVIVAL OR DEMISE?

STANLEY S. BERGEN, JR., M.D., AND CHERYL J. TICE, M.S., NEWARK*

United States academic health centers are being affected by profound changes in the health care system. These changes affect the future of academic health centers which must adapt to survive.

This review addresses a subject of vital importance not only to this state, but to the entire country: the future of academic health centers in the United States. These centers consist of a medical school, at least one other health professional education program, and at least one closely aligned and geographically proximate teaching hospital. Such units are being affected by profound changes within the health care system; changes that include the potential oversupply of physicians, conflict between regulation and competition, and alterations in the reimbursement system.

What has led us to this dilemma? More importantly, what strategies must we pursue to survive within the current environment? An environment where the external forces of government's changing attitudes concerning health care, the public perceptions of our institutions, the less than friendly actions of our colleagues, affiliated community hospitals, and former students practicing at competing suburban hospitals seem to conspire against us.

In the 1960s, it was the general perception by both government and the medical profession that this country faced a shortage of 50,000 physicians. A few expressed doubts that a real shortage existed; they felt it was more a problem of maldistribution—too many specialists and/or not enough physicians in the inner cities and rural areas.[1]

Despite this difference of opinion, medical schools increased production of physicians urged on by legislative initiatives including federal operating and capital budget financial rewards. State legislatures also mandated new medical schools or expanded those already in existence; and the medical community and general public expressed need and desire for more physicians. As a consequence, within the decade, the number of medical schools increased from 90 to 127 and, subsequently, the number of graduates annually rose from 9,000 to 16,000. At the same time, immigration barriers were lowered so that increasing numbers of foreign medical graduates were admitted for training in this country; although this policy has been reversing since 1976, the number of foreign medical graduates, both United States and alien, remains high although the preponderance now is of United States origin with many a product of questionably marginal education programs. United States FMGs now populate graduate medical education programs in urban public hospitals, some of which are an integral part of the academic health center.[2]

The latest tally of academic health centers nationwide lists 126 fitting the set of general criteria.[3] These centers vary markedly in organizational structure, sponsorship, governance, location, and function. Two subset categories include university medical centers, the majority of academic health centers, and those that include large public hospitals created or that have evolved into facilities predominantly intended to serve the poor and medically indigent. There is considerable overlap between these categories and service function.

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*Dr. Bergen is President of the University of Medicine and Dentistry of New Jersey. Ms. Tice is Executive Assistant to Dr. Bergen. Correspondence may be addressed to Dr. Bergen, UMDNJ, Administration Complex, 30 Bergen Street, Newark, NJ 07107-3007.

These centers offer diversity in their research programs and their educational programs for nurses and allied health professionals but share one major common characteristic—the dominant role of the medical school/teaching hospital combination. The relationship shared by these centers and the federal government, unusually productive immediately following World War II, has gradually deteriorated, especially within the last decade.[4,5]

Academic health centers, thus far, have occupied a central position in the American health care enterprise and health professions education. They have served as referral centers for the sickest patients, complicated procedures, and diagnostic problems and fulfilled the role of clinical research. However, there are a number of reasons why these institutions are in jeopardy. As Dr. Robert Petersdorf noted, "Unless we make some changes in the way in which we operate our academic enterprise in education, research, and health care, we may be heading for disaster—a disaster that is largely of our own making."[6]

The evolution of academic medical centers was shaped by four federal initiatives: the funding of research and research training by the National Institutes of Health, legislation which permitted a close association between Veteran Administration hospitals and medical schools, health-manpower legislation, and Medicare and Medicaid health service entitlement programs.[3,7] In the decades of new, increased funding for the medical centers, there was relatively little pressure on the university, medical school, or hospital trustees to consider joint planning or efficient governance. Almost everything we did was in response to real or perceived need and included the reward of additional revenue sources and easy access to capital.

The initiatives and relationship between the government and the medical centers were beneficial to both. Since these centers contribute significantly to the training of most United States educated physicians and many other health professionals, they were willingly staffed and operated as the major high technology hospitals, the trendsetters for the practice of medicine in this country. Through their teaching hospitals, the centers provide complex, specialized care including burn units, organ transplantation programs, neonatal units, and sophisticated treatment modalities such as lithotripsy—procedures and services that most community hospitals cannot and/or usually do not offer. The universality of residency training for graduates of United States medical schools as well as expanded opportunities for many foreign medical graduates provided the physician manpower for treating the poor and indigent patients at these centers at a time when society had agreed that access to health care was a right of all citizens. These residents supplied the added physician staffing necessary to care for poor patients at many teaching hospitals. That role was willingly provided when the romance of generous funding was available since, at the same time, these patients provided the needed resource for educational programs.[4]

Collectively, during the 1984 to 1985 academic year, these centers employed 65,000 faculty, enrolled almost 136,000 students, and operated training programs for more than 50,000 resident physicians. In fiscal year 1984, their research budgets from the National Institutes of Health (NIH) alone were approximately $2 billion, representing more than 40 percent of NIH obligations for that year. The teaching hospitals affiliated with these centers recorded 6,500,000 admissions and 44,000,000 outpatient visits in 1985.[8] As evidenced by the aforementioned statistics, their role in teaching, research, and patient care has forged these major teaching hospitals into big businesses.

As we reflect on these staggering statistics, we must keep in mind another significant problem faced daily by these medical centers. Of these 126 centers, 33 (including some of our most prestigious institutions) currently reside in the midst of the largest, most troubled inner cities of our nation. Indeed, half—63—are located in the 40 largest cities.[9] While some of these cities show economic revival and facility rehabilitation, problems relating to location are evident. Patients, visitors, and professional employees all express fear of the neighborhood and the institutions experience added costs to provide a secure environment and successfully compete for a qualified and motivated work force.

THE CHARACTERISTICS OF TEACHING HOSPITALS

The role of the major teaching hospital includes services which involve an increasing complexity of medical problems. The "case mix" normally seen at such teaching hospitals necessitates costly technology and equipment and more sophisticated health care services and intense staffing. Thus, a number of characteristics separate the teaching hospital from most suburban hospitals.

The teaching hospital must work out new relationships with physicians, HMOs, clinics, PPOs, and other care systems to assure itself of patients able to utilize sophisticated services.

1. Uncompensated care, particularly the ambulatory care portion with noteworthy debt and charitable care losses, is the teaching hospital's albatross. This is a "social severity" which more than likely resides with the patient rather than the disease. People who are poor with little or no insurance will put off early retirement for an illness and often are more seriously ill when they enter the hospital than other patients with similar diagnoses.[10] Also, these patients typically will remain in the hospital longer for lack of a suitable place to convalesce and continue care. Thus, to the extent that teaching hospitals disproportionately serve the poor, they incur the greater expenses—expenses which often are not accounted for in a diagnosis related group (DRG) or prospective pricing system.[11]

2. The DRG system provided the first step in an evolving new strategy for not only limiting cost but also comparing the cost of health services. Some regions and cities have issued publications which list the comparative prices by DRG among hospitals within a region to encourage prudent buying by individual and corporate consumers. In response, physicians and business entrepreneurs have developed surgicenters, emergicenters, and other ambulatory care type facilities that siphon off many low-cost cases that leave the major medical centers with the more costly health care functions.[12] The DRG system cannot account for the complexity and mixture of cases normally seen in these institutions. Thus, the major teaching hospital loses to its less expensive suburban counterpart, physicians compete against it, and industry seeking a price bargain shuns its services whenever possible.

3. Since these facilities find themselves with a greater and greater percentage of severely ill and complicated cases, they face a "burn-out" effect upon staff—how long can an administrator or physician expect maximum staff productivity at 95 percent occupancy versus a community hospital where the same service with less sick patients is 60 percent occupied?

4. The advent of freestanding ambulatory care facilities has drawn off revenue-producing services and competes on a price basis with existing health care institutions thereby forcing many teaching hospitals to reorganize and develop freestanding facilities in order to hold their market share of less costly and profitable cases. These efforts have been inconsistently effective and for many academic health centers, the expensive cases and services continue while the low-cost high-income units of services have diminished. The incentive here is to assure a "feeder" system and to free certain high revenue-producing services from hospital overhead, and cost controls. The dilemma, however, is as these services are "spun" out of the hospital, remaining services incur higher per unit costs.

5. Residency training and the presence of clinical research in the setting of undergraduate and graduate medical education in the teaching hospital are costly. As NIH funding has leveled off, Medicare/Medicaid reimbursement for graduate medical education has begun to wane. This trend has precipitated a major setback to the academic health center since no alternative funding sources for faculty and staff are readily or immediately available.[11,13] The critical importance of research and teaching in the overall mission of the academic health center means the teaching hospital now must bear an increased burden in developing these new treatment methods and providing housestaff support. The survival of the teaching hospitals depends on addressing the issues of the operation and financing of these educational and research programs. In many cases we have lost the direct and indirect support of these functions and the hospital no longer has the revenue margin to cover these expenses or to cross subsidize.

These five factors result in the teaching hospital experiencing higher costs than those of nonteaching hospitals. It has been estimated that carrying these added social responsibilities adds over $2 billion annually to teaching hospitals' costs.[14]

HOW CAN ACADEMIC HEALTH CENTERS COPE?

As competition forces hospitals and academic health centers to be ever conscious of costs, the teaching hospitals will be the entity which will suffer the most.[15] The philosophy that states "building and providing a health service where the name of the game is appealing to consumers and getting them in and out of the system rapidly" is the logic we must deal with at this time.[16] Should research hospitals, such as the four in New Jersey that comprise the University Health System of New Jersey, be forced to compete with other hospitals, and if so, on what scale can the services offered be measured? How can academic health centers cope with these new challenges and threats to their survival and continue to provide the added functions allocated to them by society?

In the area of medical education and research, we must take the initiative and persuade state legislatures and the federal government that, while it may make sense to cut back moderately on undergraduate enrollments, this will be successful only if the flow of foreign-trained graduates is effectively controlled and support for training of the next generation of physicians is continued as part of the price of health care. With respect to faculty, we must emphasize reasoned reductions in total numbers, while assuring a reasonable number of tenure track openings for talented young academicians and recognize the necessity of faculty that can perform research, teach, and provide clinical services in the traditional manner.

Since the practice income of most medical schools' faculty comprises between one-fourth and one-half of total expenditures of medical schools, this will continue to be and may even expand as support for clinical faculty and their activities.[17] Expectation that more funding will emanate from the NIH or other governmental sources is unrealistic; therefore, it will be crucial for the research units of the future to establish more collaborative relations with other universities, with research institutes, and with industry, not only for the financial resources that such relationships can provide, but also as an outlet for discoveries that may generate revenue applicable to patents and licensure of product development and marketing.[17] This source of income from the latter, however, should not become a great expectation since the big payoff patent is very rare.[18]

Perhaps the most critical challenge the academic health center must face is that of the delivery of health care. Academic health centers, in the new system, must reflect their higher costs, including the designation as the sole regional provider for many services. Indigent care subsidies from federal and state government have become crucial to maintain hospital services and assure access for those unable to pay. While various state level experiments currently are underway, a uniform national system of funding must evolve soon or potential indigent patients will flow to the states with the most generous health care benefits.

We also must examine current governance of our teaching hospitals. The attraction of the investor-owned hospital companies acquiring teaching hospitals or providing management under contract has been their ability to enhance vertically integrated regional health care delivery systems that these corporations have developed over the past decade. An advantage of purchasing a tertiary care center is that complex cases no longer have to be transferred out of a chain's health care system. This philosophy can work in reverse. We must examine the potential regional consortia that can compete and gain the advantages of a system that includes home care, ambulatory care satellites, and long-term care. Examples of viable new organizations with academic health centers at the hub are emerging.

The teaching hospital must move aggressively to work out new relationships with physician-provider groups, HMOs, freestanding clinics, PPOs and other managed care systems in order to assure itself of the numbers and types of patients to utilize its sophisticated services. The opportunity will be in providing tertiary level services for vertically integrated networks as well as the other functions, which only an academic medical center can perform. We must build upon our strengths of faculty expertise and acknowledged quality.

At the same time, we must promote a strategy of diversification so as to become less dependent on inpatient revenues. The challenge to the teaching hospital is to provide quality care in the appropriate setting at an affordable price. If such hospitals are serious about diversifications, they must look at the vehicle of consortia or regional systems as a potential solution.[19]

CONSORTIA OR REGIONAL SYSTEMS

Strategy has been discussed and planned between our own University and its core teaching hospitals and, subsequently, the University Health System of New Jersey was formed. The goals of this corporation, necessitated by our changing health care industry, reflect what the academic health center must accomplish in order to survive: to develop joint business ventures, to reduce emphasis on institutional care, to explore new ambulatory care opportunities along with home health and long term-care linkages, to establish and expand new primary care network relationships, and to regionalize new technology and tertiary care.

The formation of University Health System was necessary in order to identify the special position the core teaching affiliates hold in the state of New Jersey. We hope this corporation will maintain a public awareness and change the public's attitude towards New Jersey's medical schools and teaching hospitals.

Unless our medical schools and their teaching hospitals receive assistance, in the form of better reimbursement for indigent patients, subsidies for the teaching programs that they provide, and support of research from industry, some may emerge unscathed, but others will be mere shadows of themselves. The teaching hospitals of academic health centers of today must compete in this ever-changing health care industry, but they must receive special assistance, even shelter from some forms of this competition. They are too important as the hub of the United States health care system to be sacrificed by short-term goals. The absence of academic health centers would require the reinvention of such institutions in the next decade.

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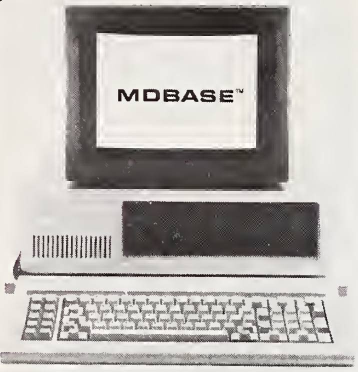

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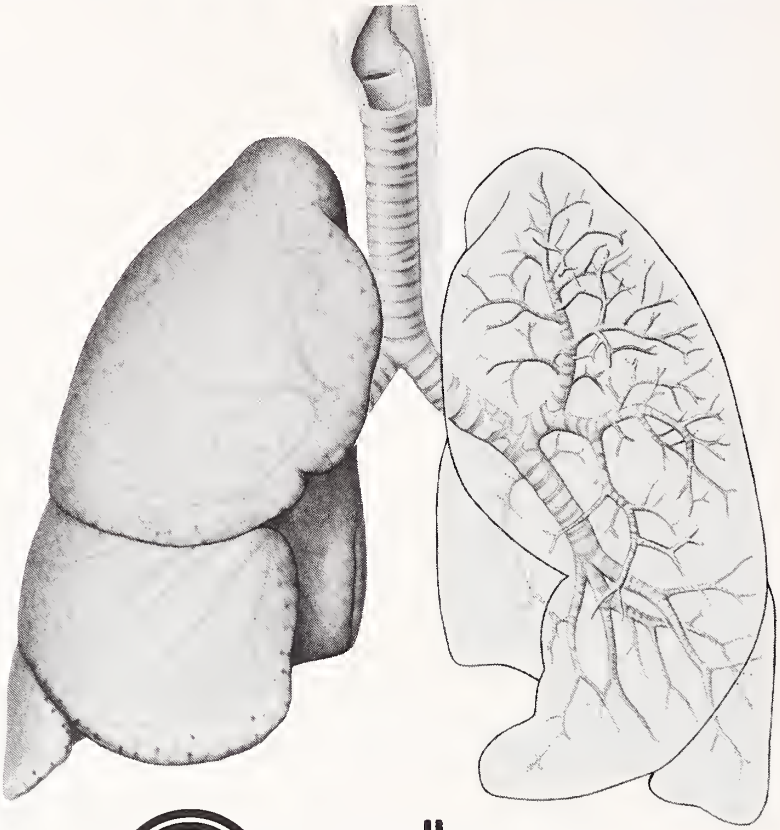

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Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
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PRIMARY RESISTANCE TO ANTITUBERCULOUS DRUGS IN A NEW JERSEY HOSPITAL

ALAN LIN-GREENBERG, M.D., AND MICHELLE DELTIEURE, M.D., JERSEY CITY*

We reviewed drug sensitivity patterns to first isolates for* M. tuberculosis *in untreated patients and found a 15 percent rate of primary drug resistance. The clinical and public health implications of this rate center about choice of initial therapy, supervision of identified drug-resistant cases, and need for statewide epidemiologic surveillance.

Drug resistance to antituberculous (anti-TB) medication among persons who have not had prior treatment is defined as primary drug resistance (PDR). Knowledge of PDR patterns is important in devising initial chemotherapeutic regimens before sensitivity results are available, as at least two effective agents are necessary to assure efficacy.[1]

Rates of PDR vary with location, age, race, and ethnicity. In recent data reported by the Centers for Disease Control, *Mycobacterium tuberculosis* resistant to one or more antituberculosis drugs in patients who had not been treated before, were isolated from 6.9 percent of cases.[2] PDR ranged from 3.9 percent for the state of Washington, to 14.5 percent for areas around south Texas. The following study was undertaken to define PDR in our hospital, which serves an urban northern New Jersey community.

METHODS

Patients seen at the Jersey City Medical Center with newly diagnosed and previously untreated culture positive tuberculosis between January 1984 and August 1986 constitute the subject population of this report. Standard techniques of specimen processing, isolation, and identification of *M. tuberculosis* were employed.[3] Sensitivity testing was performed at the State Mycobacteriology Laboratory in Trenton using radiometric in vitro assay system (Bactec, Johnston Laboratories).[4] Drug resistance was defined as growth greater than 1 percent of control at concentrations of INH = 1.0 μg/ml, rifampin = 2.0 μg/ml, ethambutol = 7.5 μg/ml, and streptomycin = 2.0 μg/ml. Only the initial positive culture isolate was tested for each patient. Demographic data and relevant medical history were obtained by retrospective review of hospital and clinic charts. Hispanics were defined as individuals with a Hispanic surname and who were born outside of the continental United States.

RESULTS

During the study period, 46 patients were identified with culture-positive newly diagnosed tuberculosis for whom sensitivity data were available. Seven, or 15 percent, of these isolates were found to be resistant to one or more of the four drugs tested. The clinical source of the resistant isolates are shown in Table 1. As illustrated in Table 2, all seven isolates were INH resistant, and in addition resistant to at least one other anti-TB drug. Primary resistance to each of the four drugs is shown in Table 3 and ranged from 15 percent to INH to 2 percent to ethambutol and streptomycin.

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*From Jersey City Medical Center where Dr. Lin-Greenberg is Chief, Division of Infectious Diseases, and Dr. Deltieure is a Senior Resident. Correspondence may be addressed to Dr. Lin-Greenberg, Jersey City Medical Center, Jersey City, NJ 07304.

Place of birth of the patients is shown in Table 4. Five of 34 patients born in the United States and 2 of 7 Hispanic-surnamed patients born outside of the continental United States had resistant isolates. Table 5 presents demographic features of the patients with resistant organisms. All except 1 were 36 years of age or less, and 6 of 7 patients were male. Three of the 7 patients used illicit intravenous drugs. All of the patients were black or Hispanic. As a basis of comparison, nonobstetric admissions to our hospital are approximately evenly divided between male and female, are 48 percent black, 25 percent Hispanic, and 25 percent white. There was no identifiable underlying medical condition that predisposed to resistance.

DISCUSSION

Our rate of PDR of 15 percent denotes urban northern New Jersey as an area with one of the highest rates of PDR in the nation.[2] In some areas, high rates of PDR can be attributed to Asian and Hispanic immigrant populations; our rate of PDR among the population born in the United States was 5 of 34 or about 14 percent.[5,6] The small size of our population does not allow for delineation of statistically meaningful demographic profiles, though our resistant cases tended to be male, relatively young (below 37 years of age), and black or Hispanic.

The occurrence of high rates of PDR, especially where immigrant groups have not played a major role as a continuing source of resistant organisms, is thought to be a marker of transmission of resistant organisms from patients who have received inadequate treatment (often due to noncompliance).

The implication for the clinician about to initiate treatment of a newly diagnosed case of tuberculosis centers around the choice of initial therapeutic regimen. While the combination of INH and rifampin presently is recommended for populations with low prevalence of PDR,[7] a PDR rate of 15 percent with a high degree of dual resistance to both of these agents mandates at least an initial four-drug regimen when PDR is suspected, or for patients who present with a severe degree of illness.

The public health implications of our high rate of PDR are significant. Careful supervised care of identified drug resistant cases to ensure adequate compliance is crucial. More comprehensive statewide epidemiologic surveillance and analysis is needed to more completely define the extent of PDR in New Jersey.

TABLE 1

Source of Resistant Clinical Isolates

Source	**Number**
Sputum	5
Urine	1
Paraspinal Abscess	1

TABLE 2

Pattern of Drug Resistance

Patient	**INH**	**RIF**	**EMB**	**SM**
1	R	R	S	S
2	R	R	S	S
3	R	R	S	S
4	R	R	S	S
5	R	R	S	S
6	R	R	R	S
7	R	S	S	R

R = Resistant
S = Sensitive
INH = Isoniazid
RIF = Rifampin
EMB = Ethambutol
SM = Streptomycin

TABLE 3

Primary Drug Resistance of M. Tuberculosis

	INH	**RIF**	**EMB**	**SM**
Number Resistant	7	6	1	1
Total Tested	46	46	46	46
% Resistance	15	13	2	2

INH = Isoniazid
RIF = Rifampin
EMB = Ethambutol
SM = Streptomycin

TABLE 4

Place of Birth

Birthplace	**Number**	**With Resistance**
United States	34	5
Outside United States*	7	2
Haiti	1	0
Southeast Asia	2	0
Asia	2	0

*Hispanic

TABLE 5

Profile of PDR Group

Age	**Sex**	**Race**	**Conditions**
28	Male	Hispanic	—
28	Male	Black	IVDA
33	Male	Black	—
35	Male	Black	IVDA, EtOH
36	Male	Black	EtOH, Chronic Renal Failure
32	Female	Black	IVDA
60	Male	Hispanic	Asthma

IVDA = Intravenous drug abuse
EtOH = Heavy alcohol intake

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CHLAMYDIA TRACHOMATIS ANTIGEN

JOSEPH M. LOMBARDO, M.D., PH.D., AND LILY L. SIDDIQUI, B.S., M.T., NEWARK*

Infection with* Chlamydia trachomatis *is recognized as a major sexually transmitted disease in the United States, affecting an estimated four million individuals each year. Education regarding sexually transmitted diseases should be directed toward all sexually active persons, regardless of age.

Infection with *Chlamydia trachomatis* is recognized as a major sexually transmitted disease in the United States,[1,2] affecting an estimated 4 million individuals each year.[3] The diagnosis by detection of organism antigen, rather than relying on organism viability and subsequent in vitro growth, has led to an increased awareness of chlamydial infections.[4,5] The organism is responsible for a plethora of clinical infections in both men and women with the sequellae of repeated infection resulting in disabling disease, sterility, or increased risk of death.[6,7] A concern from the viewpoint of the general public health is that a large percentage of infected individuals are asymptomatic and, therefore, never obtain treatment for the infection.[8] This article reports the results of enzyme immunoassay (EIA) testing for the presence of *C. trachomatis* antigen in 3,131 cervical specimens derived from sexually active females attending prenatal or postpartum clinics at the University of Medicine and Dentistry of New Jersey, Newark.

SUBJECTS AND METHODS

During a ten-month interval between December 1985 and October 1986, 3,131 specimens from the cervix were analyzed by EIA technique for the presence of *Chlamydia trachomatis* antigen. The patients attended either the obstetrical and gynecological (OB/GYN) clinics, the maternal infant care (MIC) clinic, or the high-risk pregnancy clinic at University Hospital in Newark. The specimens from the MIC clinic were from pregnant or postpartum adolescent females, the specimens from the OB/GYN clinics were from predominantly pregnant or postpartum adult females, and the specimens from the high-risk clinics were derived from both the MIC and OB/GYN clinics. The enzyme immunoassay technique used to detect the *C. trachomatis* antigen in these specimens was Chlamydiazyme (Abbott Laboratories). This technique was performed according to the manufacturer instructions and absorbance determined with a Quantum II spectrophotometer (Abbott).[9] A test was considered reactive if the optical absorbance value exceeded the mean of the negative controls by 0.10.[5]

RESULTS

Approximately 15 percent of the specimens were reactive for *C. trachomatis* antigen (Table 1). Of the reactive tests, 92 percent were present in patients between 16 and 30 years of age; 52 percent were present in 16- to 20-year-old patients (a group which comprised but 26 percent of the total number of patients). Another 40 percent were present in 21- to 30-year-old patients, a group which comprised 56 percent of the total number of patients (Table 2). Those patients over 30 years of age represented 15.5 percent of the total patients tested but accounted for only 4.3 percent of the total number of reactive tests in the population. Individuals younger than 15 years of age comprised a very small percentage of the total patients (2.2 percent) yet represented 3.7 percent of the total reactive tests.

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*From UMDNJ-New Jersey Medical School, Newark. Correspondence may be addressed to Dr. Lombardo, UMDNJ-New Jersey Medical School, Department of Pathology, MSB C-544, 100 Bergen Street, Newark, NJ 07103.

The total number of tests performed in each of the divided age groups and the percentage of those tests which were reactive are illustrated in Table 3. The age group with the highest percentage of reactive tests comprising their population (29 percent) was found in females 16 to 20 years of age. Females in the 10- to 15-year-old age group were next highest with 25 percent of the total tests performed being reactive. The percentage of reactive tests to total test number decreased in the 21- to 30-year-age group (11 percent) and decreased still further (4 percent) in females over 30.

SUMMARY

Review of the EIA testing to detect the presence of *C. trachomatis* antigen in the cervical specimens of 3,131 predominantly pregnant or postpartum patients from this area reveals the overall prevalence of *C. trachomatis* infection (indicated by reactive EIA) to be approximately 15 percent. While most of the reactive tests were in the 16- to 20-year-old group and 21- to 30-year-old group, the groups with the highest percentage of reactive tests comprising their total test population were the 16- to 20- and 10- to 15-year-old patients with reactive tests comprising 29 percent and 25 percent of their total test number, respectively. The frequency of *C. trachomatis* infection evident in individuals this young is of sobering significance, especially with data suggesting it may be repeated chlamydial infections which lead to devastating clinical sequellae observed.[10] Data indicate that the number of reactive tests decreases relative to the total tests performed in older age groups, 21 to 30 and 31 and older.

Given the prevalence of reactive EIA testing to *C. trachomatis* antigen in this area, further epidemiologic investigation of this entity should be performed throughout the state. Development of organized, accessible data bases constructed for efficient utilization of compiled data will be essential for planning future cost-effective health care strategies. Sexually active individuals, especially those in the younger age groups, at high risk for contracting *C. trachomatis* infection should be tested for the presence of this organism. Education regarding sexually transmitted diseases, especially chlamydia, should be directed towards all sexually active individuals regardless of age.

TABLE 1

Tests and Percent Reactive by EIA

Total Test Number	3,131
Number Reactive	462
Percent Reactive	14.8%

TABLE 2

Percentage of Tests Positive by Age

	Total Tests		Positive Tests	
	No.	%	No.	%
Age (years)				
10-15	69	2.2	17	3.7
16-20	820	26.2	239	51.7
21-30	1,758	56.1	186	40.3
31 and Older	484	15.5	20	4.3
Total	3,131	100	462	100

TABLE 3

Prevalence Rate of Infection by Age

Age (years)	*10-15*	*16-20*	*21-30*	*31 and older*
Total Number Tests	69	820	1758	484
Percent (%) Reactive	25%	29%	11%	4%

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CAROTID ENDARTERECTOMY IN A NONTEACHING COMMUNITY HOSPITAL

LOUIS RUVOLO, M.D., WILLIAM HOLADAY, M.D., KENNETH BRAIT, M.D., WILLINGBORO*

We reviewed 100 consecutive carotid endarterectomies in our community hospital. Results were analyzed, compared to other series, and found to compare favorably.

Complications from carotid endarterectomy, currently the most common vascular surgical procedure performed in the United States, result in morbidity, mortality, and inflated hospital costs. Since most of this surgery is done in community hospitals, we examined our experience in 100 consecutive operations.

There were no deaths. There was one stroke with full recovery, two transient ischemic attacks (TIA), and three wound hematomas, none of which caused secondary morbidity. Cranial nerve injuries were minor and transient.

In the community hospital, we recommend continuing evaluation of techniques and analysis of results in order to obtain results which are comparable to or better than current published series.

Of the more than 450,000 vascular procedures done annually in the United States, the most frequent is carotid endarterectomy with over 100,000 performed.[1,2] There is controversy regarding the risk/benefit ratio and the morbidity/mortality ratio of the operation. A recent presentation generated a series of newspaper articles and television discussion most of which raised serious criticism of the extent and the results of carotid surgery in this country.[1] Other published articles in the past have presented extremely high complication rates.[3-5] Moreover, those reports with excellent results of carotid surgery generally have been from large university hospitals and by nationally known surgeons.[6,8] Since most surgery in New Jersey is done in community hospitals, we examined the results of carotid surgery in our community hospital.

METHOD OF STUDY

We reviewed the charts of 100 consecutive carotid endarterectomies performed by surgeons between 1977 and 1985 at the Rancocas Valley Division of Zurbrugg Memorial Hospital.

Preoperative evaluation included CAT scan of the brain, directional doppler, ocular plethysmography (OPG), phonoangiography, and B-mode real-time ultrasound. Eighty-seven operations were preceded by arch arteriography and 12 operations were preceded by digital subtraction angiography; 1 operation had no contrast study.

The patient population of 54 men and 39 women had an average age of 64. Seven patients had bilateral operations. Indications for the procedure were: "classic" TIA in 49; amaurosis (fugax or permanent) in 27 and prior completed stable stroke with full recovery or minor deficit in 9. Fifteen asymptomatic patients included those with nonclassic symptoms, tight stenosis, abnormal OPG, or large ulceration. Surgery was delayed about five weeks for patients who had a stroke.

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*Drs. Ruvolo and Holaday are affiliated with the Section of Vascular Surgery and Dr. Brait is affiliated with the Section of Neurology, Rancocas Valley Division, Zurbrugg Memorial Hospital, Willingboro. Correspondence may be addressed to Dr. Ruvolo, Rancocas Valley Surgical Associates, P.A., Professional Building North—Box 3, Sunset Road, Willingboro NJ 08046.

Preoperative neurological consultation was obtained in 93 cases. Preoperative cardiology consultation was obtained in all cases. Normotensive, normocarbic anesthesia with an indwelling arterial line was used. Magnifying glasses have been used by the surgeon routinely during the past few years. A shunt (initially Javid and now Pruitt-Inahara) was used in every operation. In one case, part of the plaque had to be removed before the Javid shunt could be inserted. Four to seven thousand units of heparin were used with occasional reversal by protamine sulfate. At least two vascular surgeons were present during the definitive part of each procedure. Median postoperative stay was four days.

RESULTS

There was no postoperative mortality. There was one postoperative stroke consisting of expressive aphasia which cleared in one month.

There were two minor sensory transient ischemic attacks. Three wound hematomas required reopening of the wound (two under general anesthesia and one under local anesthesia). No secondary morbidity developed from treating the hematomas.[7] Six patients developed transient dysfunction secondary to injury of the ramus mandibularis branch of the facial nerve which caused minor cutaneous numbness near the mandible. One patient had transient vocal cord paralysis secondary to recurrent nerve injury. Three patients had temporary hypoglossal nerve dysfunction, though one lasted more than six weeks.

REVIEW OF OTHER PUBLISHED SERIES

These results should be viewed in the context of other series. Easton, a neurologist, reviewed 228 patients operated on from 1970 to 1976 in two 600-bed community hospitals by 11 surgeons and found a stroke rate of 14.5 percent and a mortality rate of 6.6 percent for a "combined stroke-mortality rate of 21.1 percent."[3]* Prioleau, a surgeon, reviewed 317 cases at a university hospital and three community hospitals from 1962 to 1976 by 15 surgeons and found a 10.7 percent stroke rate and a 3.2 percent mortality.[4] Early superb results were reported by Jesse Thompson in 1976 with a 0.8 percent stroke rate in 868 cases of TIA.[6] Ott and Cooley reported 240 cases in 1979 with 0.64 percent mortality and a 1.3 percent permanent and a 1.9 percent temporary neurological deficit rate.[8] Excellent results were reported by Krupski, a surgeon, in 1985, in an article contrasting results of 100 cases done at each of three different types of hospitals: a university hospital, several private community hospitals, and a university-affiliated veterans administration hospital.[9] On the other hand, Brott, a neurologist, reported on 461 cases done in 16 hospitals in the Cincinnati area.[10] The stroke rate was 8.6 percent and the mortality was 2.8 percent. Of these operations, 30.2 percent was for asymptomatic bruit or stenosis, 13.9 percent was for dizziness without cranial nerve symptoms, and 6 percent was for "other." Interestingly, during the same year, Hafner, a surgeon, reported on 570 carotid endarterectomies done in the Cincinnati Good Samaritan Hospital with a 0.9 percent stroke rate and a 0.7 percent mortality.[11] Muuronen, a neurologist in Finland, reported on 128 cases operated on at the University of Finland between 1980 and 1982 with 6.4 percent severe deficits, 7 percent slight deficits, and a 3.6 percent mortality rate (Table).[12]

DISCUSSION

Carotid endarterectomy is not a technically complex operation. However, in carotid surgery, the margin for error is so thin that careful attention to detail is required. Our practice of using at least two skilled vascular surgeons during each operation allows one surgeon to carefully observe the performance of the other, thus diminishing the chance of error. The practice of having a skilled assistant observing closely and assisting the operating surgeon may be partly responsible for the low complication rates reported in the two series of cases reported by Krupski and Brott where residents were assisted by attending vascular surgeons.[9,10]

Having a competent anesthesiologist in the room at all times monitoring blood pressure with an indwelling arterial line allows maintenance of blood pressure at safe levels.

Standardization of technique is another factor in achieving good results. Repetition allows familiarity with the sequential steps of the operation and allows both surgeons to anticipate and, thus, facilitate the moves of the other. This especially is true with use of a shunt, where routine frequent use increases skill.

The shunt must be inserted very carefully and without hurry. Care must be taken to insure that the arteriotomy is extended well above the plaque to allow insertion of the shunt without carrying a piece of arteriosclerotic debris on the end of the shunt.

The use of magnification allows precision in removing the plaque, examination of the vessel and its intimal surface and margin, and precise arteriotomy closure.

Preoperative consultation with the cardiologist and with the anesthesiologist will aid in patient selection and diminish risks. Close association with a neurologist provides more precise evaluation of symptoms, sharpens the judgment for surgery, and provides another viewpoint, which acts as a stimulus to intellectual precision and objectivity.

The difference in results reported by neurologists and surgeons may be that only those surgeons with good results tend to publish their results while neurologists who see high complication rates publish those unfavorable results. The difference in the studies written by Brott and Hafner, both in Cincinnati, is particularly noteworthy.[10,11]

CONCLUSION

Prior to performing an operation, the surgeon must believe that the benefits of the procedure exceed the risks. There are insufficient data available to define the

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*We believe it is illogical to combine stroke and mortality into a single total in the Easton article since all the patients who died were stroke patients and, therefore, were counted two times in the 21.1 percent.

TABLE

Comparison of Results

Name	Speciality	No. of Cases	Strokes (%)	Mortality (%)
Prioleau (1976)	Surgeon	317	10.7	3.2
Thompson (1976)	Surgeon	868 (TIAs)	0.8	?
Easton (1977)	Neurologist	228	14.5	6.6
Hayes (1979)	Surgeon	276	0.3 permanent 2.5 transient	1.08
Ott and Cooley (1980)	Surgeon	240	1.3 permanent 1.9 transient	0.64
Sundt (Mayo)	Surgeon	99	1 major 2 minor	1
Rosenthal (1983)	Surgeon	818	1.2 permanent 1.5 transient	?
Muuronen (1984)	Neurologist	110	6.4 severe 7.0 mild	3.6
Hafner (1984)	Surgeon	570	0.9	0.7
Slavish (1984)	Surgeon	743	1.8 permanent 3.5 transient	2.7
Brott (1984)	Neurologist	431	8.6	2.8
Krupski (1985)	Surgeon	300	2	1
Ruvolo et al. (1986)	Surgeon	100	1	0

risk of stroke associated with varying degrees of carotid stenosis and symptoms. When the stroke rate and the mortality rate of carotid surgery is high, it is doubtful that the surgeon is heeding the old dictum. "First, do no harm." A large multicenter study to determine the nonoperative risk of carotid stenosis is needed.

Results comparable to the best published series can be achieved in the community hospital. We believe that the following points have been, in part, responsible for our results: 1) consultation with appropriate nonsurgical colleagues; 2) the use of at least two vascular surgeons during each procedure; 3) standardization of technique; 4) careful, unhurried insertion of the shunt; and 5) the use of loupe magnification.

In all surgery, continuing evaluation of techniques and constant analysis of results are essential. With carotid surgery, surgeons and hospitals should review regularly their own morbidity and mortality. A high stroke or mortality rate should lead to either modification of technique or cessation of surgery.

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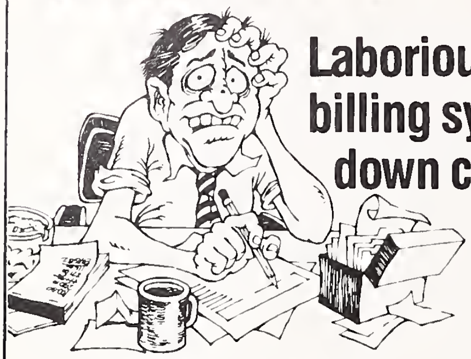

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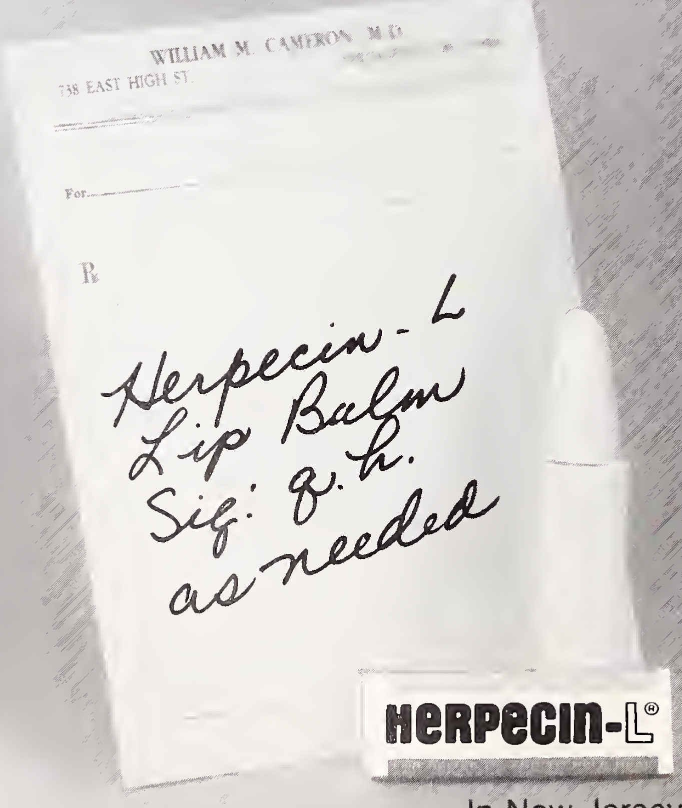

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CASE REPORT: ELEVATED THYROID-STIMULATING HORMONE DESPITE HYPERTRIIODOTHYRONEMIA

MICHAEL H. GOLDMAN, M.D., CATHERINE A. SCHERALDI, M.D.,
IRVING M. PALTROWITZ, M.D., ENGLEWOOD*

A hypothyroid patient on liothyronine (T_3) therapy was found to have persistently elevated thyroid-stimulating hormone values despite simultaneously increased triiodothyronine measurements. Thyroxine (T_4) levels were depressed. T_4 is the best therapy for hypothyroid patients.

Elevated thyroid-stimulating hormone (TSH) and diminished thyroxine (T_4) are the hallmark laboratory findings in primary hypothyroidism. Elevated triiodothyronine (T_3) levels frequently are found alone or with increased thyroxine (T_4) levels in hyperthyroidism.[1] The simultaneous findings of raised TSH levels and low T_4 levels with increased T_3 levels, therefore, would be distinctly unusual. We report such a case and discuss its significance.

CASE REPORT

A 33-year-old white female was evaluated for a 20-year history of goiter. Early but scant information revealed an enlarged gland, with a normal uptake and a low protein bound iodine (PBI) level of 3 μg/dl (normal 4 to 8 μg/dl). Replacement therapy was instituted with thyroid extract in order to shrink the goiter and normalize the low PBI level. She was switched to liothyronine 75 mcg per day during the 1970s with some decrease in the size of her thyroid gland. She denied any history of head or neck irradiation or thyroid cancer in her family. The patient claimed to be taking her medication faithfully.

At the time of her current examination, the patient was clinically euthyroid. Her thyroid was diffusely enlarged, soft, and non-nodular, with the right lobe measuring 4x2 cm and the left 2x1 cm. Deep tendon reflexes were normal as was the texture of her skin and hair. Increased T_3 and TSH and depressed T_4 levels were found (Table). In addition, antimicrosomal antibodies were positive in a titer of 1:1600 (normal <1:10). After institution of therapy with L-thyroxine, 0.2 mg/day, normalization of all thyroid hormone levels occurred as well as shrinkage of the thyroid goiter.

DISCUSSION

Control of TSH secretion is mediated by intracellular pituitary T_3 levels. Both direct binding of circulating T_3 and conversion of T_4 to T_3 within the pituitary contribute to modulation of TSH levels.[2] Because the latter process is quantitatively more important in controlling TSH secretion, the measurement of plasma T_3 levels in hypothyroid patients may be misleading. T_3 levels may be normal or even elevated despite increased TSH levels. This finding previously has been shown to occur in patients with endemic goiter, congenital hypothyroidism, and Graves' disease treated with excessive antithyroid drugs or RAI^{131}.[3-7] In these dysfunctional thyroid conditions, T_3 synthesis is selectively normal or increased simultaneously with low T_4 production and a compensatorily increased TSH level. The higher

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*Dr. Goldman is a member of the Endocrinology Department and Dr. Paltrowitz is a member of the Gastroenterology Department, Englewood Hospital. Dr. Scheraldi is a Fellow in Endocrinology/Metabolism, Columbia-Presbyterian Hospital, New York. Correspondence may be addressed to Dr. Scheraldi, M.D., 180F Central Avenue, Englewood, NJ 07631.

TABLE

Chronological Summary of Thyroid Function Tests

Date	T_3 Resin (%)	T_3 RIA (ng/dl)	T_4 (mcg/dl)	FTI* (Units)	TSH (MIU/dl)	Medication (per day)
12/4/85		400			36	Liothyronine 75mcg
12/13/85	24	202	2.3	0.5	21	Liothyronine 75mcg
1/23/86	27	323**	3.9	1.06	10	Liothyronine 75mcg
2/21/86	30	136	11.5	3.58	1.0	L-thyroxine 0.2mg
Normal	23–34	80–220	4.5–12	1–4.3	0–4.9	

*Free Thyroxine Index.
**Taken six hours after last dose.

biological potency of T_3 than T_4 allows for a clinically euthyroid state but it is insufficient to suppress TSH centrally, a so-called "compensated hypothyroid state."

Our patient illustrates an additional cause for hypertriiodothyronemia with elevated TSH secretion: replacement with liothyronine (Cytomel®) therapy in a hypothyroid patient.

The T_3 levels were clearly beyond the normal range on two occasions even though TSH secretion never was satisfactorily suppressed into the normal range. It has been shown that blood levels of T_3 following ingestion of 50 mcg of liothyronine may not return to the normal range for 12 to 24 hours. Taking the patient's T_3 level at these times may have shown a normal level, however, even at this dosage, mean 24-hour triiodothyronine blood concentrations are found to be in the toxic range.[8] It would appear, from observing the trend in this patient, that continued or increased liothyronine therapy eventually may normalize the TSH secretion. However, this would be at the risk of potential toxicity to other organs such as heart, kidney, and liver, whose sensitivity to circulating T_3 exceed that of the pituitary.[2] Within two to four weeks on 50 to 75 mcg of liothyronine therapy, most hypothyroid patients will normalize their elevated TSH levels. We are uncertain as to why this patient's TSH did not normalize.

Another possible explanation for this patient's findings is that she was intermittently compliant, i.e. taking her medication only before coming to her consultations. Since after T_3 ingestion, the plasma levels of T_3 peak in two to three hours, elevated T_3 levels could be observed along with elevated TSH levels. This patient claimed to be quite conscientious, taking her medication regularly for years.

The persistently low T_4 levels seen in this patient, despite an increased TSH level reflected a dysfunctional thyroid gland, and her significantly elevated antithyroid antibodies suggest an autoimmune thyroiditis as the cause.

CONCLUSION

The more satisfactory treatment for hypothyroid patients is to use levothyroxine (T_4). As shown here, maintenance of clinical euthyroidism and normalization of both elevated TSH and depressed T_4 levels, can be simultaneously accomplished without intermittent toxic plasma levels of T_3. Other authors also have recommended T_4 as the proper drug choice for replacement therapy.[9]

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ADVANCES IN CANCER: CHEMOSENSITIVITY TESTING WITH ANTINEOPLASTIC AGENTS

GEORGE J. HILL, M.D., KARIMULLAH A. ZIRVI, PH.D., HELENE Z. HILL, PH.D.,
SURESH RAINA, M.D., NEWARK*

Five chemosensitivity tests of anticancer drugs were studied with respect to their advantages and disadvantages. Studies were conducted of four conventional methods plus a primary tissue culture assay (PTCA) that may provide new opportunities to evaluate growth factors and drug combinations in vitro.

The search for effective methods to predict the clinical response of a patient's tumor to antineoplastic agents has produced much that is important in the field of oncology, even though no test is yet available that is comparable to antibiotic sensitivity of bacteria. In this report, we will describe four techniques commonly used to test cancer chemotherapeutic drugs and the advantages and disadvantages of each, and present our own recent work in this field. Each of these methods has been used in the preclinical testing of cancer chemotherapeutic agents, and each has a well-established role in the identification of new agents or combinations for clinical use. Two of these methods are in vitro assays, using tissue culture techniques, and two use tumor transplantation from humans to mice, so-called "xenogenic" or interspecies transplants.

In considering the problem of evaluation of drugs against human tumors, certain facts about the biology of tumors should be emphasized. First, although the growth of a tumor mass generally is progressive, it usually is not rapid. Only a few cells are in the process of active progression toward cell division in most tumors, and the remaining cells are quiescent. This phenomenon is called a "low growth fraction." Secondly, the cells in a tumor mass or in metastases may exhibit variable sensitivity to chemotherapy, which is an expression of "clonal heterogeneity." Third, there often is considerable variation in vascularity, and thus in drug concentration, in different parts of a primary tumor mass, and in its metastases. Fourth, a tumor mass is composed of both proliferating cells (also known as clonogenic or stem cells) and nonproliferating cells. It is the clonogenic cells that ultimately progress to cause tumor growth and metastases. An observed effect of chemotherapy on nonproliferating cells may be irrelevant, if the clonogenic tumor cells are resistant to therapy.

Other problems exist in the field of chemosensitivity assays that are not directly related to tumor biology. These include, first, the microbial contamination of most epithelial cancers. Bacterial or fungal growth will ruin tissue cultures, obscure indirect assays, and cause sepsis in the animal hosts of tumor transplants. Contaminating mycoplasma and viruses cause particularly insidious problems in long-term cultures. Second, many drugs are known to require activation to be effective.[1-3] It can be presumed that our knowledge of the appropriate and optimum methods to produce activated drugs for testing is incomplete, at best. Third, drugs often are used in combinations, or as adjuvant therapy. Not only is it difficult to establish

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*Drs. G.J. Hill, Zirvi, and Raina are affiliated with the Department of Surgery and Dr. H.Z. Hill is affiliated with the Department of Radiology, UMDNJ-New Jersey Medical School. Correspondence may be addressed to Dr. George J. Hill, Chief, Division of Surgical Oncology, UMDNJ-New Jersey Medical School, 100 Bergen Street, Room G595, Newark, NJ 07103.

TABLE 1
Chemosensitivity Tests
Relative Advantages and Disadvantages

Clonogenic Assay (CA)

Advantages	*Disadvantages*
Only stem cells	Requires dispersal
Easy to count	Sterility required
Clonal variation visible	Slow
	Poor plating efficiency
	No subcultures
	One time application
	Activation
	Validity uncertain
Subrenal Capsular Assay (SRCA)	
High rate of success	Labor intensive
Easy to visualize	Limit 8 days
Combinations can be studied	Precision is limited
Measurement by direct vision	One-time observation
Schedules can be studied	
Activation is in vivo	
Sterility not critical	
Fragments can be studied w/o dispersal	
Nude Mouse Assay (NMA)	
High "take" rate from some tumors	Low "take" rate for some tumors
Subculture possible	Expense
Combinations can be studied	Labor intensive
Schedules can be studied	Infection
Visible growth present	Very slow
Activation is in vivo	
Validity high	
Rapid Cytotoxicity Test (RCT)	
Inexpensive	All cells tested
Rapid	High growth fraction needed
Nonsterile	Activation needed
Automatic mechanization possible	Timing is nonclinical
Combinations can be studied	Antimetabolites unsuccessful in test
Schedules can be studied	
Primary Tissue Culture Assay (PTCA)	
Serum-free medium	Tissue contamination
Combinations can be studied	Sterility required
Schedules can be studied	Activation needed
Stromal cells (fibroblasts) do not grow	
Subcultures possible	

models for drug combinations in the laboratory, but it is particularly difficult to simulate the complex schedules that are used for the combination in clinical practice. Also, when the drugs are used in postoperative adjuvant therapy, there usually is no measurable tumor present to use for evaluation of the effect of chemotherapy. When drugs are administered as preoperative or "neo-adjuvant" chemotherapy, the clinical result may be incompletely evaluated because radiation therapy or surgery is done before the full effect of chemotherapy is apparent. Finally, the pharmacokinetics of cancer chemotherapeutic agents appear to be much more complex than than of many other drugs, particularly the antibacterial antibiotics. It would appear that it is the intracellular drug concentration, in tumor cells, that is the critical drug concentration in cancer chemotherapy, not simply the serum concentration. Metabolism, excretion, and transport are important dynamic factors in producing the effective therapeutic level of drugs, and these must be considered as significant variables throughout the long intervals between drugs doses. Furthermore, the ability of the patient to withstand drug toxicity, physically and psychologically, may play a large role in the outcome of therapy. An apparently valid chemosensitivity test result may be vitiated in the clinical situation because of untoward or unexpected side effects of therapy that preclude the use of adequate doses or duration of drug therapy.

The evaluation of the effect of antineoplastic agents is a highly demanding, labor-intensive, and costly process. Ideally, the tests should be evaluated by a "blind" process, in which the patient and the clinician are unaware of the laboratory result. At present, however, there often is a considerable verbal flow of information to and from the laboratory, since physicians and patients are understandably searching for clues to improve the outcome, and laboratory scientists are searching for clues to improve the methodology and reliability of the tests.

METHODS

The four most commonly used chemosensitivity assays are clonogenic assay, subrenal capsular assay, nude mouse assay, and rapid cytotoxicity tests. Recently, in our laboratory and in some other laboratories, another in vitro system, primary tissue cultures of human tumor specimens in serum-free media, has been used for chemosensitivity assays. In each assay, the result of the test is measured by the response of the tumor (T) to chemotherapy, compared with a control (C), expressed as a percentage (T/C x 100). The advantages and disadvantages of each test are summarized in Table 1.

Clonogenic assay (CA). The clonogenic or stem cell assay is performed by plating a suspension of tumor cells in soft agar and comparing the number of colonies that grow in the presence of a chemotherapeutic agent with the number of colonies that grow in the absence of the drug.[4] This technique enables the investigator to evaluate only the clonogenic (proliferating) tumor cells, since growth of fibroblasts is inhibited in soft agar, while the nonproliferating tumor cells and normal hematopoetic cells that are present in the tumor suspension do not form colonies. This technique is the most widely used chemosensitivity test at present, and is the reference for all other methods.[5,6]

Subrenal capsular assay (SRCA). In the subrenal capsular assay, a fragment of tumor to be tested, approximately 1 mm in size, is placed under the renal

TABLE 2

Chemosensitivity Tests of Mouse and Human Tumors

Tumor Type	Host	Drug	Test	Control	Conclusion
B16 Melanoma	C57 BL/6 mouse	BCNU	STA+	In vivo	True +
		CTX	STA+	In vivo	True +
		L-PAM	STA±	In vivo	False negative
		araC	STA+	In vivo–	False positive
Colon 06	mouse	5-FU	STA+	In vivo+	True +
Colon 37	mouse	5-FU	STA+	In vivo–	Inconclusive
Harding-Passey Melanoma	CD2F1 mouse	DTIC+ MeCCNU	SRCA+	In vivo+	True +
Oral, squamous	human (KB)	DDP	STA+	CA+	True +
		ADR	STA+	CA+	True +
		BCNU	STA±	CA+	Inconclusive
		MTX	STA–	CA+	False –
		5-FU	STA–	CA+	False –
Bladder	human (EJ)	DDP	STA±	CA+	Inconclusive
		MTX	STA–	CA+	False –
		5-FU	STA–	CA–	True –
Colon	human	5-FU	NMA±	In vivo+	Inconclusive
Cervix	human (Soto)	MitoC	CA+	SECSG interlab reproducibility trial (17)	True +
		MTX	CA–		MTX unstable
		DDP	CA±		Inconclusive
		BLM	CA±		Inconclusive
		L-PAM	CA+		False +
		HU	CA–		True –

capsule of an anesthetized, random bred mouse. The tumor fragment then is measured accurately with an optical micrometer, and the mouse is injected with the test drug. Eight days later the mouse is killed, the kidney removed, and the tumor fragment is measured again. The amount of growth or regression is compared with a similar fragment placed in an untreated mouse.[7] While this method is labor intensive, it has the advantage of presenting directly visible results, and the drugs are activated by physiologic processes in the host mouse. Furthermore, it has been used successfully to study drugs in combination.[8] The test depends on the fortuitous discovery that a xenogenic tumor fragment will live for up to eight days in the mouse's subrenal capsular area before undergoing transplant rejection. Unfortunately, only one observation can be made, at an arbitrarily selected time, for the mouse then must be sacrificed.

Nude mouse assay (NMA). The congenitally athymic Nu/Nu strain of mice, also hairless (hence "nude"), is sufficiently immunodeficient to accept xenogenic tumor transplants in many cases.[9, 10] The mice are fragile and highly susceptible to infection, and many grafts fail to grow because of the death of mice from sepsis, or from other reasons related intrinsically to the tumor itself. As a result, the transplants to nude mice are used mainly for expansion of tiny tumor fragments and for evaluation of new agents against tumors of specific sites, e.g. colon, lung. The slow and erratic growth of these grafted tumors makes the method generally impractical for selection of agents for the donor patient, at least at the time the tumor is obtained. The method also is very expensive and the maintenance of the mouse colony is technically demanding.

Rapid cytotoxicity test (RCT). Numerous tests have been utilized to provide direct or indirect rapid evidence for effect of antineoplastic agents.[11-13] The earliest tests were direct cytotoxicity tests using so-called vital dyes such as eosin and trypan blue, which are excluded by healthy cells and stain dead or dying cells in tissue culture medium. However, many effective agents do not kill tumor cells immediately, but rather inhibit various important biochemical processes. Therefore, various other methods have been developed to measure the effect of drugs immediately on the cellular biochemical pathways. Most commonly, these methods assess the tumor cells' uptake of radiolabelled metabolic precursors of critical substances such as DNA and RNA, in the presence or absence of the chemotherapeutic agent being tested.[13] DNA synthesis is measured by the cells' uptake of tritiated thymidine. RNA synthesis is measured by the uptake of tritiated uridine. Thymidine and uridine are two of the five nitrogenous bases that are incorporated into DNA and RNA in various triplet sequences; thymidine is present only in DNA and uridine is present only in RNA. The uptake of these agents can be assessed within hours after the tests are begun, so the results can be available in time to be clinically relevant. Unfortunately, the theoretical advantage for such tests has been frustrated by numerous problems, including the low-growth fraction of many tumors, the fact that the metabolism of nonproliferating tumor cells and normal parenchymal cells is not discriminated from that of the proliferating tumor cells, and the difficulty of obtaining debris-free, viable single-cell suspensions of fresh human tumors.

Primary tissue culture assay (PTCA). The primary tissue culture assay takes advantage of the fact that cells from various tissues can be cultured on the surface of collagen-coated tissue culture dishes, in the absence of serum, but with proper, specific supplementation of the medium with hormones and trace metals.[14,15] Samples of the tumors are cleaned, minced, and treated with enzymes. The enzymes are removed by washing the cells with medium. The tumor cell suspension immediately is placed onto collagen-treated petri dishes. Two days after seeding, the tumor cells are incubated with drugs for one hour or longer at 37°C in an incubator. After incubation, the drugs are removed, and the cells are allowed to proliferate. Population development in both control- and drug-treated dishes is followed quantitatively by counting the cell nuclei with a Coulter counter. Unlike the clonogenic assay where only stem cells grow, in a primary tissue culture assay, 50 to 75 percent of the cells plated attach to the dishes and grow. Therefore, primary tissue culture assay is a good representative of the in vivo situation.

RESULTS

Comparison of chemosensitivity tests. We have made comparisons of the first four chemosensitivity tests with each other and with clinical treatment results, using 13 drugs in a variety of human and mouse tumors (Table 2). The tumors studied were: human oral (squamous), bladder, colon, and cervix; and mouse melanoma (B16 and Harding Passey) and colon. Tumor samples have shown responses in clonogenic assay to cisplatin, adriamycin, BCNU, methotrexate, 5-fluorouracil, mitomycin C, and alkeran (L-PAM). Responses have been seen in the rapid cytotoxicity test with tritiated thymidine to BCNU, cyclophosphamide, cisplatin, adriamycin, and cytosine arabinoside.[16] We have used nude mice to expand tumor for evaluation by other methods, not for direct testing. The subrenal capsular assay results showed good correlation with clinical schedules of DTIC plus methyl CCNU, and with 5-FU, in mouse tumors.[8] The antimetabolites 5-FU and methotrexate did not show activity in the rapid cytotoxicity test, even when the drugs were known to be active against the same tumors in the host animal, and cytosine arabinoside showed a false-positive result. Responses to bleomycin and hydroxyurea in vitro were inconclusive.

Serum-free media and primary tissue culture assay. The advantages of both the rapid cytotoxicity test and the clonogenic assay may be combined by the use of serum-free media, designed to support only the growth of clonogenic tumor cells. Nonproliferating tumor cells and normal fibroblasts will not persist in such media. Drug combinations and additional applications of drugs would be possible in liquid serum-free medium. We, therefore, are working to develop a serum-free medium which could support the growth of tumor cells obtained at the time of patient's biopsies. To that end, we have studied growth of nine tumor specimens (eight colon and one lung) obtained at the time of biopsy in six different serum-free media and in one serum-supplemented medium. The media used in these studies were:

a. D-ITS medium: (1:1) Dulbecco's modification of Eagle's medium (DME)/Ham's F12 medium (F12) supplemented with insulin, transferrin, and selenium.

b. D-TITES medium: (1:1) DME/F12 supplemented with transferrin, insulin, triiodothyronine, epidermal growth factor, and selenium.

c. C-ITS medium: Chee's essential medium (CEM) supplemented with insulin, transferrin, and selenium.

d. C-TITES medium: CEM supplemented with transferrin, insulin, triiodothyronine, epidermal growth factor, and selenium.

e. HITES medium: Roswell Park Memorial Institute medium 1640 (RPMI-1640) supplemented with hydrocortisone, insulin, transferrin, and estradiol.

f. Serum-supplemented medium (SSM): RPMI-1640 + 10% fetal calf serum.

Precoating of the dishes with collagen is essential for the attachment of the cells and for growth in serum-free media. Seven of the nine specimens studied (six colon and one lung) grew in all of the six serum-free media for about 4 to 6 days. However, C-TITES medium was found to be better than the other media in supporting long-term growth (20 to 28 days) of the specimens.

We did not observe any stromal cell (fibroblasts) growth in any of the serum-free media until the end of the experiments (24 to 28 days). However, with two tumor specimens, growth of the stromal cells was visible in serum-supplemented media, within 10 to 12 days of seeding. The growth of some of the tumor specimens in athymic nude mice provided a large quantity of tissue that was used to study hormone and growth factor requirements. Two of these tumors were studied for their growth characteristics as primary tissue culture in serum-free media. All of the serum-free media contained insulin and transferrin. We found that deletion of either of these proteins inhibited the growth of the tumors. It further was noted that each of the supplements added individually to serum-free medium had little effect, but that in combination there was a synergistic effect on cell growth.

Thirteen specimens were obtained from patients' tumor biopsies (12 colon and 1 lung). Only 9 of these (8 colon and 1 lung) provided enough material to do tissue culture studies. All of the specimens were used to study the effects of various serum-free media on the conditions required for optimal growth.

The usefulness of the primary tissue culture method for in vitro assessment of cancer chemotherapy was studied for two clinically used drugs (doxorubicin and 5-fluorouracil). Dose-response curves were obtained against primary tissue cultures prepared from six tumor specimens (five colon and one lung). All six tumor specimens showed cell attachment within 10 to 12 hours of seeding in both C-TITES and C-SSM. In four tumors (three colon and one lung) almost equal numbers of cells (2.5 x 10^4 cells/dish) had attached to the dishes in both C-TITES and C-SSM within two days after seeding.

Dose-response curves for doxorubicin and 5-fluorouracil also were obtained against primary tissue cultures prepared from two colon tumor xenografts growing in nude mice. The dose-response curves from xenografted tumors were found to be identical with those obtained for the same two drugs (doxorubicin and 5-fluorouracil) against primary tissue cultures of the original biopsy specimens.

EFFECTS ON DNA SYNTHESIS IN VITRO

DNA synthesis was studied in B16 melanoma cells in the presence of three inhibitors: cytosine arabinoside (ara-C), aphidicolin (AC), and hydroxyurea (HU).

We found that even at very high doses of these three drugs, there still is some residual DNA synthesis and that about the same amount of DNA synthesis is present at high concentrations of all three drugs. It appears that these three drugs inhibit the DNA synthesis mediated by the enzyme DNA polymerase alpha but not that mediated by DNA polymerases beta and gamma.

Alkaline sucrose density gradient molecular weight profiles of DNA were obtained after it was synthesized, and compared to the profiles of DNA that was synthesized and then incubated with a high concentration of hydroxyurea. When the synthesis period was short the new pieces were small and when the synthesis period was long the new pieces were long. It thus appeared that short pieces of DNA can continue growing in the presence of hydroxyurea, but long pieces cannot.

SUMMARY

Studies of chemosensitivity of tumors to anti-cancer drugs have been conducted using four conventional methods, plus a relatively new primary tissue culture assay (PTCA). The advantages and disadvantages of the clonogenic assay (CA) and rapid cytotoxicity tests (RTC) in vitro, and of the nude mouse assays (NMA) and subrenal capsular assay (SRCA) in vivo were clearly identified, with some 13 anti-neoplastic agents. A variety of human and mouse tumors were studied, using both cultured cell lines and primary tumor isolates. We confirm the reports of others that there is no chemosensitivity test now available that has a satisfactory degree of reliability (specificity and sensitivity) for predicting the therapeutic usefulness of any drug against any tumor in an individual patient. The four conventional methods all have significant disadvantages. The PTCA in serum-free media offers important theoretical advantages over the other methods, such as the ability to add drugs at desired intervals and to test drug combinations, while at the same time allowing precise definition of growth factors and the effect of therapy on clonogenic cells.

Our serum-free PTCA utilizes various traditional tissue culture media, such as Eagle's medium, supplemented with a number of defined chemicals. The growth factors are added sequentially, so as to allow growth of only the tumor cells, without permitting growth of the stromal elements. The essential growth factors have been, for various tumors, such substances as transferrin, insulin, tri-iiodothyronine, epidermal growth factor, selenium, hydrocortisone, and estradiol. With stromal elements suppressed, the tumor cells can be studied for response to chemotherapy in vitro. Preliminary tests of colon xenografts in nude mice showed good correlation with the in vitro results in PTCA. This method also may enable investigators to develop targets for inhibition of tumor growth factors in vitro.

The mechanism of action of cancer chemotherapeutic agents continues to be of great interest. We have shown that the effects of drugs on DNA synthesis readily can be studied in serum-free media. Fundamental knowledge of the precise sites of action of antineoplastic drugs may lead to improved selection of drugs in combination, and a more rational scientific approach to the order and timing of drugs for cancer chemotherapy.

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GOLDEN MERIT AWARD RECIPIENTS

At ceremonies held on May 1, 1987, during the 221st Annual Meeting of the Medical Society of New Jersey, at the Americana Host Farm Resort, Lancaster, Pennsylvania, the following physicians received MSNJ's Golden Merit Award indicating they held the degree of Doctor of Medicine for 50 years.

Atlantic County

Arthur Dintenfass, M.D.	Pennsylvania	1937
Leonard Bernard Erber, M.D.	Pennsylvania	1937
Morris Gottlieb, M.D.	Temple	1937
Isaac E. Leonard, M.D.	Pennsylvania	1937
Samuel Albert Shuster, M.D.	Jefferson	1937
Daniel Wilner, M.D.	Jefferson	1937

Bergen County

Stewart F. Alexander, M.D.	Columbia	1937
Frank F. Becker, M.D.	Rochester	1937
Joseph C. Braun, M.D.	Long Island	1937
Harold Davis, M.D.	Dalhousie	1937
Gerald J. Dolan, M.D.	Temple	1937
James Lawrence Evans, Jr., M.D.	Jefferson	1937
Margaret Frances Louise Galotta, M.D.	Woman's Medical	1937
John W. H. Glasser, M.D.	Johns Hopkins	1937
Abraham Katz, M.D.	New York University	1937
J. John Kristal, M.D.	Edinburgh	1937
Philip J. MacLaren, M.D.	Hahnemann	1937
Nathan W. Nemiroff, M.D.	Innsbruck	1937
N. Maurice Ré, M.D.	New York Medical	1937
Victor Albert Romano, M.D.	Beirut	1937
Jaroslaw Rozankowski, M.D.	Europe	1937
Dorothea Deimel Vann, M.D.	Cornell	1937

Burlington County

Amy S. Barton, M.D.	Michigan	1937
Watson E. Neiman, M.D.	Hahnemann	1937

Camden County

Daniel Joseph Daley, M.D.	Georgetown	1937
Joseph Newmeyer, M.D.	Pennsylvania	1937
Daniel Santor, M.D.	Messina	1937

Cumberland County

G. Anthony Mascara, M.D.	New York Medical	1937

Essex County

Joseph John Balsamo, M.D.	Bologna	1937
Benedict J. Bernstein, M.D.	Munich	1937
Albert E. Del Negro, M.D.	Syracuse	1937
Benedict R. De Phillips, M.D.	New York Medical	1937
E. Nelson Durchlag, M.D.	Cincinnati Eclectic	1937
Aaron Finkelstein, M.D.	Friedrich-Wilhelms	1937
Joseph A. Fleming, M.D.	Georgetown	1937
Alvin A. Florin, M.D.	Columbia	1937
Daniel L. Forte, M.D.	Louisiana	1937
William Furst, M.D.	Pennsylvania	1937
J. Lawrence Gillespie, M.D.	Maryland	1937
Stanley J. Goodman, M.D.	NYU-Bellevue	1937
Lionel Armand Greco, M.D.	Italy	1937
Seymour L. Hanfling, M.D.	Johns Hopkins	1937
Harold T. Hansen, M.D.	Pennsylvania	1937
Winfield L. Hartman, M.D.	Temple	1937
Robert A. Johnson, Sr., M.D.	Tufts	1937
Arnold M. Kallen, M.D.	Glasgow	1937

Irving G. Larkey, M.D.	George Washington	1937
Elias Livingston, M.D.	New York Medical	1937
Fred Meinhard, M.D.	Creighton	1937
Mario V. Pizzi, M.D.	New York Medical	1937
Ferdinand L. Roth, M.D.	Columbia	1937
Frank J. Saracino, M.D.	Rome	1937
Herbert B. Silberner, M.D.	New York University	1937
Bernhardt J. Statman, M.D.	Maryland	1937
C. Prentiss Ward, M.D.	Cornell	1937

Hudson County

Louis De Rosa, M.D.	Marquette	1937
David Goldman, M.D.	Glasgow	1937
Henry Clay Irving, M.D.	Howard	1937
Valentina Makarenko, M.D.	Ukraine	1937
Vladimir Onuferko, M.D.	Poland	1937
John P. Sakowski, M.D.	Maryland	1937
Matthew Schimenti, M.D.	Rome	1937
George Peter Schwab, M.D.	New York Medical	1937
Meyer Smith, M.D.	Cincinnati Eclectic	1937
Pasquale Anthony Statile, M.D.	Hahnemann	1937

Mercer County

James Joseph Colavita, M.D.	Hahnemann	1937
Charles Montanye Franklin, M.D.	Pennsylvania	1937
Robert Slocum Garber, M.D.	Jefferson	1937
Ellwood Godfrey, M.D.	Pennsylvania	1937
Salvatore A. Pepe, Sr., M.D.	Rome	1937
Carl C. Pfeiffer, M.D.	Chicago	1937
Stanley Sackin, M.D.	Creighton	1937

Middlesex County

Norman N. Forney, Jr., M.D.	Temple	1937
Stanley A. Gadek, M.D.	Georgetown	1937
Benjamin D. Jacobson, M.D.	Creighton	1937
Joseph T. Lang, M.D.	Prague	1937
James J. Lucey, M.D.	Temple	1937
S. David Miller, M.D.	Louisville	1937
Mates Morgenstern, M.D.	Vienna	1937
Edward I. Panzer, M.D.	Palermo	1937
William Rubin, M.D.	New York Medical	1937
Ralph E. Siegel, M.D.	Rush	1937
Irving Zuckerberg, M.D.	Glasgow	1937

Monmouth County

William J. D'Elia, M.D.	Hahnemann	1937
Edward R. Neary, M.D.	Jefferson	1937

Morris County

Joseph A. Alcaro, M.D.	Bologna	1937
Raymond Joseph Grant, M.D.	George Washington	1937
Charles Covert Scott, M.D.	Chicago	1937

Ocean County

Carmine L. Pecora, M.D.	Hahnemann	1937
Thomas McKean Thompson, M.D.	Jefferson	1937

Passaic County

Edward S. Balles, M.D.	Chicago Medical	1937
Jack J. Barnett, M.D.	Zurich	1937
Robert Canaan, M.D.	New York University	1937
Anthony L. Esposito, M.D.	Hahnemann	1937
Louis A. Giglio, M.D.	Georgetown	1937
Herbert N. Kohn, M.D.	Graz, Austria	1937
Margit K. Lipschitz, M.D.	Szeged	1937
James P. Morrill, M.D.	Yale	1937
Laura E. Morrow, M.D.	Pennsylvania	1937
Nathan Nussbaum, M.D.	Vienna	1937
Philip Opper, M.D.	Arkansas	1937
Thomas F. Reilly, M.D.	Columbia	1937
Aaron Weiner, M.D.	Milan	1937
David E. Zuckerman, M.D.	Pennsylvania	1937

Somerset County

Robert Rufus Ambrose, M.D.	Minnesota	1937
Aurelius John Bambara, M.D.	New York Medical	1937
Justus H. Cooley, M.D.	Harvard	1937
John F. Dixon, Jr., M.D.	Long Island	1937

Sussex County

Ewald Howard Bergmann, M.D.	Temple	1937
Francis L. Witt, M.D.	Baylor	1937

Union County

Sol Berman, M.D.	Indiana	1937
Francis Figliolino, M.D.	Bologna	1937
Milton Lane, M.D.	Ohio	1937
Robert L. Lewis, M.D.	Texas	1937
William H. Lewis, M.D.	Pittsburgh	1937
Frank Michael Mastroianni, M.D.	Long Island	1937
Aurelio Romeo, M.D.	Messina	1937

FIRST ANNUAL SENIOR CITIZENS FORUM

The Medical Society of New Jersey sponsored its first Senior Citizens Forum. This Forum was designed to better understand how current and proposed regulations will impact on the delivery of health care to the elderly and to help leaders become more knowledgeable about utilizing health care services to meet the medical needs of the elderly.

Edward A. Schauer, M.D., (standing), MSNJ President; Keynote Speaker, Lawrence Meinert, M.D., M.P.H.; Thomas Weber, Ph.D., Delegate to Task Force on Legislation (AARP); and Joseph W. Bitsack, M.D., MSNJ Task Force Coalition with Senior Citizens. *Credit: Bob Harris.*

Participants of the First Annual Senior Citizens Forum listened to the program overview on April 9, 1987, at MSNJ headquarters in Lawrenceville. *Credit: Bob Harris.*

Members of Workshop A discussed medical regulations and their administration. Dr. Bitsack (not shown) was the moderator for this workshop. *Credit: Bob Harris.*

Workshop C participants assessed the topic, "Home Care Services." Moderator Kenneth Dolan (not shown) is Executive Director of Home Care Council of New Jersey. *Credit: Bob Harris.*

Moderator Churchill Blakey, M.D., (standing) of Workshop B confers with panelists Kenneth Kuntz, Edith Edelson, and Elyse A. Perweiler. *Credit: Bob Harris.*

Lillian Ringel (standing to right) was the moderator for Workshop D where the topic of discussion was coping with medical problems of the aging. *Credit: Bob Harris.*

DOCTORS' NOTEBOOK

Trustees' Minutes; UMDNJ Notes; Dorothy Griffith Retires; Physicians Seeking Location in New Jersey

Trustees' Minutes April 12, 1987

A regular meeting of the Board of Trustees was held on Sunday, April 12, 1987, at the Executive Offices in Lawrenceville. Detailed minutes are on file with the secretary of your county society. A summary of significant actions follows:

Report of the President. . .
(1) Meetings and Conferences . . . Was informed the President attended the following meetings and conferences: New Jersey Academy of Family Physicians, New Jersey Association of Osteopathic Physicians and Surgeons, International Hospital Federation, Hudson County Medical Society, and the Senior Citizens Forum.
(2) International Hospital Federation . . . Noted a brief report by Doctor Carnes on the reception and dinner for the International Hospital Federation at MSNJ headquarters.
(3) Senior Citizens Forum . . . Commented on the Senior Citizens Forum held on April 9, 1987; emphasized that more physician input is needed.

Report of Executive Director . . .
(1) MSNJ Paid Membership . . . Noted that as of March 31, 1987, 6,560 members have paid their 1987 dues.
(2) MSNJ Financial Statements . . . Approved the financial statements for the period ending February 28, 1987.
(3) Tierno versus Atlantic County Medical Society . . . Approved the following recommendation in this case involving an antitrust suit where the plaintiffs had negotiated to sell their practice and property to Cooper Hospital/University Medical Center and alleged that Atlantic County Medical Society and Past-President Doctor Baker conspired to cause the hospital to breach its contractual relationship:

> That, after legal fees of $10,000 have been paid by Atlantic County Medical Society, the Medical Society of New Jersey will provide financial assistance to offset the county's legal expenses up to the next $5,000.

Also, requested Doctor Formica, as chairman of the special committee of the Medical Inter-Insurance Exchange, to inform the Exchange that it should be mindful of its responsibility to protect members of component societies in similar situations.
(4) Medical Necessity Reviews and DRG Classifications under New Jersey DRG Program . . . Approved the following recommendation:

> That the Medical Society of New Jersey advise the Department of Health that it is inappropriate to allow entities other than independent physician-formed review organizations to qualify as certified review organizations under the New Jersey DRG program.

(5) Pronouncement of Death and Completion of Death Certificate—State Board of Medical Examiners . . . Noted the progress report on the pronouncement of death/certificate of death rule proposal; it appears the definition of attending will be restructured.
(6) Legislative Update . . .
(a) Medicare Participation—A-2511; A-3305 . . . Observed that a significant number of physicians participated in the letter writing/telephone campaign expressing their views on these bills which still are in committee.
(b) Physical Therapy—A-2647 . . . Noted MSNJ's active opposition to this bill and physician contacts with certain assemblymen have produced favorable changes in their position.
(c) Tort Reform Bills . . . Noted three bills remain in the Senate Judiciary Committee: structured payments, statute of limitations, and cap on damages.
(7) Governor's Council on Emergency Medical Services . . . Approved Doctor Schwaeble's request to contact the physician members of the Governor's Council in order to achieve a unified medical component position on the emergency medical services system for presentation to the Governor; asked for progress reports on a regular basis.
(8) Resident Physician Job Action . . . Directed that a letter be sent to Dr. Bergen and to the president of the New Jersey residents' union, asking them to do all they can to settle their differences amicably so that patients in New Jersey can be better served.
(9) Litigation . . . Voted to enter this case amicus and directed that an ad hoc committee be formed to determine whether the fee was reasonable. Noted that at issue is whether a promise and guarantee made by an attorney for payment of a patient's fee constitutes a legal contract for which he should be held accountable.

UMDNJ Report . . . Received as informational a report from Dr. Stanley S. Bergen, Jr., M.D., highlighting the following: efforts are being made to clarify the position of The Peer Review Organization, Inc., that attending physicians are responsible for decisions of residents and fellows in teaching programs; a resolution from the Hospital Medical Staff Section on educational qualifications of health care providers has been submitted to the Board; and UMDNJ has petitioned the Department of Higher Education and the New Jersey Board of Higher Education to terminate the transfer program as of 1988, stating UMDNJ no longer will accept transfer students from foreign medical schools into the second or third year of study.

NJ Hospital Association . . . Received as informational a report from Mr. Louis P. Scibetta highlighting the following: appreciation was acknowledged to MSNJ for the reception for guests of the NJ Hospital Association (35 physicians and hospital officers from 18 countries);

federal cuts to hospitals; NJ Hospital Association Annual Meeting held on April 2, 1987; and the hospital retail pharmacy bill (A-2559 and S-2424) which would prevent hospitals and their parent corporations or subsidiaries from opening retail pharmacies closer than 1500 feet from their property—this legislation is being actively opposed by MSNJ and the Hospital Association.

MSNJ Student Association . . . Approved the Bylaws of the Medical Society of New Jersey Student Association.

Council on Legislation . . . Approved all the positions recommended by the Council on Legislation, with the exception of A-2118 (Marriage Licenses), changed to deferred action pending receipt of a report from the Department of Health and MSNJ's Council on Public Health; A-3022 (Health Planning), changed to active opposition; A-3224 (Ocean Testing), changed to active support; and A-3137 (HMO), maintained position of active support.

Council on Public Health . . .
(1) Bedside Reagent Strip Determination . . . Approved the following recommendations:

That Resolution #44E, Bedside Reagent Strip Blood Glucose Determination in the Hospital Setting, be supported providing the personnel performing the test are required to meet strict standards of quality control.

That a letter be issued by the Department of Health to all New Jersey hospitals, stating that the use of bedside reagent strip blood glucose determination is permissible when administered by trained personnel.

(2) Limited Drivers' Licenses for Visually Handicapped Persons: Approved the following recommendations:

That the Medical Society of New Jersey endorse the concept that the Division of Motor Vehicles be encouraged to perform vision screening at its location, with the proviso that licensed drivers should have the screening done in the office of an ophthalmologist or optometrist of their choice.

That all licensed drivers under age 70 should be screened every ten years, and all licensed drivers over 70 should be screened every five years.

That the Medical Society of New Jersey endorse the visual requirements for operating a not-for-hire motor vehicle recommended by the New Jersey Academy of Ophthalmology and Otolaryngology.

That the preceding recommendations be reaffirmed and presented to the New Jersey Department of Motor Vehicles and the state legislature for implementation.

That the Medical Society of New Jersey support development of criteria and legislation to allow limited licensure of visually handicapped persons.

(4) 1987 Eye Health Screening Program . . . Approved the following:

That the 1987 Eye Health Screening Program be held the week of October 5, 1987.

Committee on Finance and Budget . . . Approved the following recommendations:

That the budget for the fiscal year beginning June 1, 1987, and ending with May 31, 1988, in the amount of $3,260,000 with $2,475,000 to be raised through member assessments be adopted.

That the 1988 assessment be set at $330 per regular dues-paying member. (No change from prior year.)

That the 1988 assessment be set at $40 per member for affiliate members (no longer practicing in New Jersey). (No change from prior year.)

That the 1988 assessment for associate members (interns-residents licensed in New Jersey) and licensed residents, provided the individual is in a residency program entered upon within a reasonable time after his or her graduation from medical school be set at $25. (No change from prior year.)

That the 1988 assessment be set at $10 per student for medical students. (No change from prior year.)

Committee on Long-Range Planning and Development . . . Approved and forwarded to the 1987 House of Delegates for consideration the following recommendation:

That interim meetings of the Medical Society of New Jersey House of Delegates, as structured in Resolution #13 (1986 Annual Meeting), be discontinued.

Ad Hoc Committee on Health Care Reimbursement Policies . . .
(1) Reimbursement for Participating/Nonparticipating Physicians . . . Approved the following recommendation:

That the Medical Society of New Jersey oppose any proposal by Blue Cross-Blue Shield or any other insurance company to reimburse participating physicians differently from nonparticipating physicians for the same services.

(2) Membership Survey . . . Approved the following recommendation:

That the Society's membership be surveyed regarding their Blue Shield, HMO, and PPO participation.

Unfinished Business . . .
(1) Proposed Resolution on Physician Responsibility in Teaching Programs . . . Approved and forwarded to the 1987 House of Delegates for consideration, the following Resolution:
Whereas, The Peer Review Organization of New Jersey, Inc., has taken the position that attending physicians are responsible for the errors and omissions of residents and fellows in teaching programs; and
Whereas, it is unfair to hold an attending accountable for an error made by a physician in training without the prior approval of the attending; and

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Whereas, The PRO of New Jersey, Inc., has maintained that the above action is in compliance with the Health Care Financing Administration (HCFA) policy; now therefore be it

Resolved, that the Medical Society of New Jersey petition the AMA to request the HCFA to alter its position on physician accountability in teaching programs so that residents and fellows are accountable for their own errors, and teaching-attendings are accountable only when they have failed to discharge their teaching responsibility.

(2) Nonionic Contrast Agents for Intravenous Administration . . . Will receive a statement from the New Jersey Hospital Association of their conclusions concerning the use of nonionic contrast agents.

New Business . . .

(1) Resolution on Educational Qualifications of Health Care Providers . . . Awaiting review of an indepth study by the Committee on Medical Education on "Strengthening Educational and Licensure Standards."

(2) Future Problems for Practicing Physicians . . . Reviewed correspondence from Lindsay L. Pratt, M.D., Vice-President for Medical Affairs at Newcomb Medical Center, and sent a copy of the correspondence to Doctor Weierman, chairman of the Hospital Medical Staff Section and the Committee on Utilization Review Systems, for reply.

Note: Doctor Pratt was concerned about three issues: Can we attract physicians to assume the responsibilities of department directors in our hospitals? In three years, will we be able to staff our present acute care hospital services with adequate nursing? The increasing administrative demands upon the practice of medicine have created the need for a medical director or vice-president for medical affairs—should MSNJ create a section for physicians participating in administrative medicine?

(3) Denial of Payment for Substandard Care . . . Voted to participate in a letter-writing campaign to congresspersons regarding the denial of payment for substandard care.

UMDNJ Notes

Stanley S. Bergen, Jr., M.D.
President

Ground was broken on April 7, 1987, for the Center for Advanced Biotechnology and Medicine (CABM), a $28.2 million facility intended to be a world-class center for the development and application of biotechnology advances.

The center consists of three components—the core facility, which is dedicated to basic research in four areas of molecular biology: structural biology, molecular genetics, cell and developmental biology, and molecular pharmacology; two satellite facilities, one for clinical research and the other for cell and cell products development; and network laboratories, already in operation, that offer advanced equipment, facilities and services, on a fee-for-service basis, to academia and industry.

The $28.2 million core facility is being constructed in Piscataway on a tract of land between Rutgers University's Waksman Institute of Microbiology and UMDNJ-Robert Wood Johnson Medical School, and will be connected by tunnel and walkway to each institution.

The Clinical Research Center (CRC), a $3.8 million facility scheduled for completion by next spring, will be constructed as an additional floor of the Acute Care Services Building at Robert Wood Johnson University Hospital in New Brunswick, the core teaching hospital of UMDNJ-Robert Wood Johnson Medical School. The CRC will house some 30 scientists and their support staff, and will consist of a 12-bed inpatient unit, a central analytical research laboratory, and an outpatient facility. The CRC will provide the pharmaceutical industry with a resource in which to conduct sophisticated clinical trials on new drugs, devices and methods, and will be a site for the clinical testing of the products of CABM research.

The Cell Fermentation Laboratory, an existing facility at the Waksman Institute, will undergo a $3 million modernization, and will produce and study specialized cells and cell products.

The network laboratories, located in Piscataway, allow academic and industrial researchers to obtain access to a broad range of instrumentation and expertise at a central location in New Jersey.

I fully expect that as the CABM develops, under the leadership of Aaron J. Shatkin, Ph.D., that I will be using this space in the future to describe to you its exciting progress.

Dorothy Griffith Retires

As of June 1, 1987, Dorothy J. Griffith, Assistant Managing Editor for *NEW JERSEY MEDICINE* will be retiring. Dorothy came on board MSNJ in February 1968. In February 1982, Dorothy became the Assistant Managing Editor for MSNJ's journal. We will miss Dorothy and wish her health and happiness in all her new ventures.

Physicians Seeking Location in New Jersey

The following physicians have written to the Executive Offices of MSNJ seeking information on possible opportunities for practice in New Jersey. The information listed below has been supplied by the physicians. If you are interested in any further information concerning these physicians, we suggest you make inquiries directly to them.

ANESTHESIOLOGY—Pratima M. Sheth, M.D., 966 Hunt Drive, Yardley, PA 19067. B.J. Medical College (India) 1970. Board certified. Group, partnership. Available.

ENDOCRINOLOGY—Madeline M. Manzione, M.D., 141 Holmes St., Apt. 16, Belleville, NJ 07109. New York Medical 1979. Board eligible. Board certified (IM). Group, partnership, solo. Available.

Issac Sachmechi, M.D., 61-55 98th St., #16B, Rego Park, NY 11374. Technion 1980. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

FAMILY MEDICINE—James E. Bellamy, D.O., 1642 N. Cedar Loop, Ardmore, OK 73401. UHS-Com Kansas City 1982. Board certified. HMO, group, partnership. Available July 1987.

Kenneth W. Cartaxo, M.D., 3 Roosevelt Ave., West Orange, NJ 07052. Guadalajara 1980. Board certified. Group or partnership. Available.

INTERNAL MEDICINE—Harvey Mossman, M.D., 120 Marcellus Rd., #2U, Mineola, NY 11501. Board eligible. Group, partnership, solo. Available July 1987.

Christopher J. Nickerson, M.D., 421 Conrad Rd., Englewood, NJ 07631. Milan (Italy) 1977. Board certified. Group, partnership, solo. Available.

Arthur G. Pacia, M.D., 34 Hampshire Dr., Plainsboro, NJ 08536. Santo Tomas (Philippines) 1981. Also, pulmonary. Board eligible. Partnership or group. Available July 1988.

Jashubhai G. Patel, M.D., 111-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, pulmonary. Board certified. Group or partnership. Available July 1987.

Arvind Viradia, M.D., 101 Madison Rd., Parsippany, NJ 07054. NHL Municipal (India) 1982. Group, partnership, solo. Available.

NEUROLOGY—M.E. Dughly, M.D., 9001 Ridge Ave., Unit 28, Philadelphia, PA 19128. Damascus (Syria) 1974. Board eligible. Group, partnership, solo, hospital. Available.

Samir Al-Kabbani, M.D., 2811 C Bleeker Sq., Winston-Salem, NC 27106. Damascus (Syria) 1979. Available July 1987. Single or multispecialty office.

OBSTETRICS/GYNECOLOGY—Peter Corey Mandal, M.D., 4951 Woodstone Dr., #611, San Antonio, TX 78230. Texas (San Antonio) 1983. Board eligible. Group or partnership. Available July 1987.

PEDIATRICS—Susil Kamar Malhotra, M.D., 2653 South Blvd., Apt. #154, Auburn Heights, MI 48057. Dhanbad (India) 1979. Board eligible. Available.

Prasad Thomas, M.D., 620 Bergen St., Harrison, NJ 07029. Kerala (India) 1977. Board eligible. Partnership, solo, group. Available July 1987.

PSYCHIATRY—Arthur Dworetz, M.D., 2355 Tilbury Ave., Pittsburgh, PA 15217. North Carolina 1983. Board eligible 1987. Group, partnership, solo. Available July 1987.

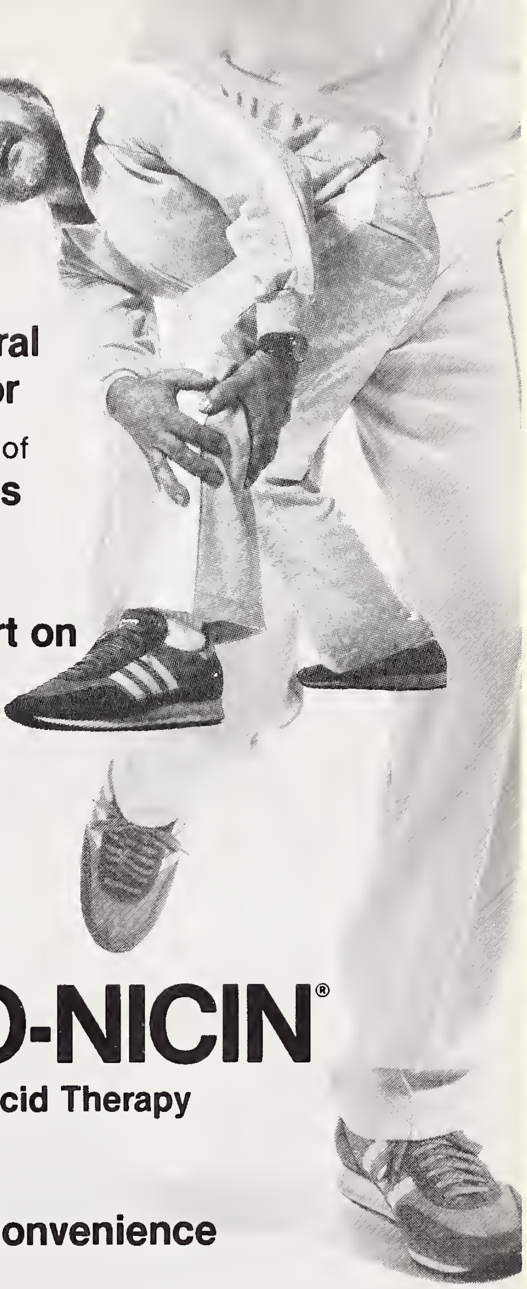
PULMONARY—Jashubhai G. Patel, M.D., 115-15 66 Ave., Apt. 2B, Forest Hills, NY 11375. Medical College Baroda (India) 1979. Also, internal medicine. Board certified. Group or partnership. Available July 1987.

SPORTS MEDICINE—F.J. Bejjani, M.D., Ph.D., 375 South End Ave., New York, NY 10280. University of Paris 1980. Board eligible. Group or partnership. Available.

SURGERY—Peter H. Block, M.D., 1332 Weathervane Ln., Apt. 2A, Akron, OH 44313. New York Medical 1982. Board eligible. Group or partnership. Available July 1987.

Mohamad S. Hashim, M.D., 200 Trenton Rd., Box 742, Browns Mills, NJ 08015. Damascus (Syria) 1977. Solo, partnership, clinic, hospital. Available.

Millard D. Strutin, M.D., 369 Mountain Ave., Springfield, NJ 07081. Rome 1981. Board eligible. Solo. Available.



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Riboflavin (B-2)...........2 mg.
Pyridoxine HCL (B-6) .....10 mg.
DOSE: 1 to 3 tablets daily.
AVAILABLE: Bottles of 100, 500.

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Nicotinic Acid ....100 mg.
Niacinamide............75 mg.
Ascorbic Acid..........150 mg.
Thiamine HCL (B-1) ......25 mg.
Riboflavin (B-2)...........2 mg.
Pyridoxine HCL (B-6) .....10 mg.
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CME CALENDAR

The following is a list of continuing medical education courses for the next two months. Contact the sponsoring organization for further information.

This list is compiled through the cooperation of the Committee on Medical Education of the Medical Society of New Jersey, The Academy of Medicine of New Jersey, the New Jersey Chapter of the American Academy of Family Physicians, and the Office of Continuing Medical Education of the UMDNJ. For information on accreditation, please contact the sponsoring organization(s), indicated by italics—last line of each item.

MEDICINE

July

20 **Transmission Electron Microscopy**
8-5:00 P.M.—UMDNJ-School of Osteopathic Medicine, E & R Bldg., 401 Haddon Ave., Camden
(UMDNJ)

August

21 **Diabetes**
2 P.M.—John E. Runnell Hospital, Berkeley Heights
(AMNJ)

NEUROLOGY/PSYCHIATRY

July

2 **Caring for the Caretakers: Treating Impaired Professionals**
9 **Calming the Agitated Elderly Patient**
16 **Creative Theater as Therapy**
30 **Getting Alcoholics from Your Office, into Treatment, and Back to Your Office**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation)

August

6 **Perinatal Addiction and Abstinence**
13 **Matching Patients to Treatments in Substance Abuse**
20 **Treatment and Aftercare for Addicted Women**
12 noon-1 P.M.—Carrier Foundation, Belle Mead
(Carrier Foundation

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Praeceptor: *Thomas Logio, M.D., F.A.C.S.*
Diplomate of the American Board of Surgery and the American Board of Colon and Rectal Surgery.

Locale: 151 Summit Ave., Summit, NJ
Time Commitment: One student, one week (Mo. and Thu.) Total = 20 hrs.
Sponsorship: Overlook Hospital, Summit
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Anesthesia and Neurosurgery; Quick Reference to Surgical Emergencies

Anesthesia and Neurosurgery, Second Edition

James E. Cottrell, M.D., and Herman Turndorf, M.D., (eds). St. Louis, MO, C.V. Mosby Company, 1986. Pp. 530. Illustrated.

The second edition of this book is a welcome updated addition to the anesthesiologist's armamentarium, both from a practical and reference point of view. These two acknowledged experts in the field of neuroanesthesia have succeeded in presenting "a rational approach to clinical neuroanesthesia."

The first five chapters deal with basic physiology of the central nervous system and changes induced in these normal mechanisms by trauma and disease.

The second section deals with neurosurgery for different areas of the brain including a new section on pediatric neurosurgery and patients with neuroendocrine disease.

Separate chapters on management of cerebral aneurysm (especially its detailed analysis of various agents for induced hypotension), anesthesia for carotid endarterectomy, and spinal injury provide a practical application of principles espoused by the various authors.

A new chapter on the management of pain discusses various mechanisms of pain causation with a brief but thorough overview of individual management.

The chapter on complications in neuroanesthesia is conspicuous by its excellence and brevity, while the chapter on brain states manages to cover a difficult topic in depth but with equal clarity.

Anesthesia and Neurosurgery deserves a place in every anesthesiologist's library. The rational approach, caliber of writing, range of topics, and easy readability make this the one book to obtain for neurosurgical anesthesia.

Stanley Bresticker, M.D.

Quick Reference to Surgical Emergencies

Drs. Bernard Gardner and Gerald W. Shaftan. Philadelphia, PA, Lippincott, 1986. Pp. 743.

In the introduction, Drs. Gardner and Shaftan state their intent of providing an initial guideline for the physician who is "on the firing line." This text is designed to cover those problems which generally are treated by the surgical staff. It is not intended to be an encyclopedia or a textbook, and in large part it fulfills this goal. The addition of an extensive section dealing specifically with pediatric trauma, and nontraumatic emergent conditions is excellent. The book is well organized, concise, and easily followed and thus facilitates commencement of initial therapy.

Several of the chapters particularly are well written. The chapter on radiology of trauma is superb and provides a concise description of which films to request and what to look for in these films for evaluation of traumatic injury. However, the chapter on radiologic nontraumatic evaluation is considerably less well organized and thus of less value. The second author seems to lose his orientation and is dealing directly from a radiologist's viewpoint. The strength of the former chapter (Dr. Sclafani) is in its clear integration of the radiologist's viewpoint with the enforced necessities of an emergency and trauma setting. The discussions of intra-abdominal conditions including trauma, bleeding, and inflammation are excellent, as is the coverage of cardio-thoracic problems both traumatic and nontraumatic. There is no chapter devoted to obstetrics or gynecologic conditions; however, the chapter on intra-abdominal inflammation does discuss ectopic pregnancy; and rape is covered in the section on pediatric trauma. These problems are seen with sufficient frequency in the surgical emergency room and it would seem appropriate to have a greater depth of coverage for these items. Chapter 27 on conditions of the ear, nose, and throat is very sketchy and limited to a very terse outline. The coverage in this chapter is redundant in that the inflammatory conditions are covered both in the chapter on the head and neck as well as within those on pediatric emergencies. Likewise, conditions of a dental nature are a frequent cause of emergency consultation; this chapter also is very sketchy and lacks detail. Since this book is intended for the surgical resident on the firing line, conditions such as this, which frequently are not emphasized in the medical curriculum, would seem to deserve a greater place in a book outlining appropriate early treatment.

At the end of the book is a valuable appendix. Several treatment trays for a busy emergency room are described. A detailed list of appropriate instruments and drugs is provided. For someone setting up an emergency service or who is preparing for infrequently seen but critical problems, this is a valuable concise source of information.

The entire book is organized in an outline format. The chapters generally begin with a short introduction, followed by a brief series of definitions, followed by basic principles, diagnostic considerations, and management procedures. By intent, description of operative events and options is de-emphasized in favor of the initial management. In general, this book fulfills the role which its authors have intended. Most of the chapters were organized for easy access to the appropriate information and provide a quick and rapid source of knowledge to the physician.

Frank T. Padberg, Jr., M.D.

Drs. Adler; Bresev; Carey; Collins; Constable; Jenkins; Lamb; Luria; Malfitan; Nappi; Picollo; Reich; Saslow; Sciarrillo; Sibert; Sloan; Townsend; Waterman

Dr. Herbert Adler

A retired internist, whose most recent office had been in Asbury Park, Herbert Adler, M.D., died on January 12, 1987, at the venerable age of 93. A native of New York City, Dr. Adler received his medical degree from Columbia University's College of Physicians and Surgeons in 1914. He was a member of our Monmouth County component and of the American Medical Association.

Dr. Morris I. Bresev

Morris I. Bresev, M.D., a retired Jersey City cardiologist and internist, died on February 24, 1987, at his home. Born in South Norwalk, Connecticut, in 1905, Dr. Bresev was graduated from Long Island College of Medicine in 1935. He had been a member of our Hudson County component and of the American Medical Association. Dr. Bresev had a number of hospital affiliations; among them was the Medical Center, Christ Hospital, Jewish Hospital, and Greenville Hospital, all in Jersey City. In 1985, he was one of the recipients of MSNJ's Golden Merit Award, honoring physicians for 50 years in medicine. During World War II, Dr. Bresev served in the medical corps of the United States Army, attaining the rank of captain.

Dr. Joseph T. Carey

Joseph Thomas Carey, M.D., died on March 5, 1987, at West Hudson Hospital, Kearny, where he was chief of anesthesiology. Born in 1921, in East Newark, Dr. Carey was graduated from Georgetown University's School of Medicine in 1948. He established his practice in his home town, and became a member of our Hudson County component and of the American Medical Association. For many years, Dr. Carey served as school physician for the Harrison school system. He had been vice-president of the medical staff at West Hudson Hospital from 1973 to 1976, president from 1976 to 1979, and a member of the hospital's executive committee from 1970 to 1986.

Dr. Raymond C. Collins

A retired ophthalmologist, presently residing in New Vernon, Raymond C. Collins, M.D., died on December 1, 1986, at the age of 72. Born in Chicago, Illinois, Dr. Collins received his medical degree from Harvard Medical School in 1941. He was a member of our Essex County component and of the American Medical Association. Dr. Collins was board certified, and had been affiliated with Saint Barnabas Medical Center, Livingston; Overlook Hospital, Summit; and the Hospital Center, Orange.

Dr. W. P. Constable, Jr.

A Princeton internist, W. Pepper Constable, Jr., M.D., died on August 13, 1986, according to information just received. A native of Baltimore, Maryland, born in 1914, Dr. Constable was graduated from Harvard Medical School in 1941. He was a member of our Mercer County component and of the American Medical Association. At one time, Dr. Constable had been a consultant serving the New Jersey Neuropsychiatric Institute, and on staff at The Medical Center at Princeton.

Dr. Robert J. Jenkins

We just have learned of the death, on October 17, 1986, of Robert Jewett Jenkins, M.D., a practitioner of family medicine in Newark and Orange for many years. Born in Charleston, South Carolina, in 1905, Dr. Jenkins was graduated from Meharry Medical College in 1932. He was a member of our Essex County component and had been affiliated with Presbyterian and Children's Hospitals, Newark. In 1982, Dr. Jenkins was a recipient of MSNJ's Golden Merit Award, in recognition of his 50 years in medicine.

Dr. Thomas M. Lamb

A retired Newton pediatrician, Thomas McGoey Lamb, M.D., died December 19, 1986, at the advanced age of 81. A native of Far Rockaway, New York, Dr. Lamb was graduated from Columbia University's College of Physicians and Surgeons in 1929. He was a member of our Sussex County component and of the American Medical Association. A Diplomate in pediatrics, Dr. Lamb had been affiliated with Brooklyn-Cumberland Hospital, Brooklyn.

Dr. Sanford A. Luria

Sanford A. Luria, M.D., formerly a Teaneck internist, had retired to Tamarac, Florida, where he died on March 8, 1987, at the age of 78. A native of Cleveland, Ohio, Dr. Luria was graduated from Ohio State University's College of Medicine in 1933. He had been a member of our Bergen County component and of the American Medical Association. Dr. Luria was a Fellow of the American College of Chest Physicians, the American Association of Thoracic Surgery, and of the American Geriatric Society. He had been affiliated with Hackensack Medical Center. During World War II, he served in the medical corps of the Army of the United States, and was awarded the Bronze Star for valor. In 1983, Dr. Luria was one of the recipients of MSNJ's Golden Merit Award honoring physicians on their 50th anniversary in the profession.

Dr. Richard C. Malfitan

Richard Charles Malfitan, M.D., a West Orange surgeon, died in Saint Barnabas Medical Center, Livingston, on February 15, 1987, at the untimely of 56. Born in Orange, Dr. Malfitan was graduated from Georgetown University's School of Medicine in 1958. He had been a member of our Essex County component, and was an associate professor of surgery at UMDNJ-New Jersey Medical School, Newark. Dr. Malfitan also had been chief of surgical education at the Veterans Administration Medical Center, East Orange, for the past 10 years.

Dr. Pasquale E. Nappi

We have learned that Pasquale E. Nappi, M.D., a practitioner of general medicine in Newark, died on January 10, 1987, at the advanced age of 83. Born in Newark, Dr. Nappi received his medical degree from Syracuse University in 1928. He was a member of our Essex County component and of the American Medical Association. Dr. Nappi was a Fellow of the American College of Obstetricians and Gynecologists. He had been affiliated with Presbyterian and the American Legion Hospitals, Newark, and with Saint Barnabas Medical Center, Livingston. During World War II, he served in the medical corps of the Army of the United States, emerging with the rank of major. In 1978, Dr. Nappi received MSNJ's Golden Merit Award in recognition of his 50 years as a physician.

Dr. Anthony R. Picollo

Anthony Robert Picollo, M.D., a practitioner of family medicine in Cliffside Park, died on Christmas Day, 1986, in his 80th year. A native of Union City, Dr. Picollo was graduated from Hahnemann Medical College, Philadelphia, in 1932. He established his first office in Union City, later moving to Cliffside Park. Dr. Picollo was a member of our Hudson County component, and had been affiliated with North Hudson Hospital, Weehawken. In 1982, Dr. Picollo was a recipient of MSNJ's Golden Merit Award in recognition of his 50 years as a physician.

Dr. Abraham L. Reich

A retired East Orange specialist in rectal and colon surgery, Abraham Louis Reich, M.D., died on January 24, 1987, at the advanced age of 93. A native of Newark, Dr. Reich was graduated from the University of Pennsylvania's School of Medicine in 1918. He became a member of our Essex County component and of the American Medical Association, and established his first office in Newark. Later Dr. Reich moved to East Orange, and became chief of the proctologic service at Newark Beth Israel Hospital. In 1968, Dr. Reich received MSNJ's Golden Merit Award honoring his 50th anniversary as a physician.

Dr. Stella K. Saslow

Stella Kohn Saslow, M.D., a South Orange gynecologist, died in Mount Sinai Medical Center, New York City, on March 13, 1987. Born in 1909, in Rumania, Dr. Saslow was graduated from the medical school at the University of Vienna (Austria) in 1933. Ten years later she emigrated to the United States and established an office in Newark, moving to South Orange in 1956, where she was still practicing at the time of her death. Dr. Saslow was a member of our Essex County component and of the American Medical Association. She was a Fellow of the American Fertility Society and had been affiliated with Presbyterian Hospital and City Hospital, now part of United Hospitals Medical Center, both in Newark. In 1983, Dr. Saslow received MSNJ's Golden Merit Award, honoring her for 50 years in medicine.

Dr. Louis F. Sciarrillo

A practitioner of family medicine in Hoboken, Louis Frederick Sciarrillo, M.D., died on March 8, 1987. Born in Italy, in 1909, Dr. Sciarrillo was graduated from the Faculty of Medicine at the University of Rome in 1936. He emigrated to the United States, obtaining a New Jersey license to practice medicine in 1940. Dr. Sciarrillo had been a member of our Hudson County component and of the American Medical Association. He was affiliated with St. Mary's Hospital, Hoboken. Dr. Sciarrillo is survived by a daughter and son, the latter a physician in California.

Dr. Scott L. Sibert

Until recently a member of the Medical Society of New Jersey, Scott Lee Sibert, M.D., died on January 13, 1987, in only his 43rd year of life. Dr. Sibert, born in Brownsville, Pennsylvania, was graduated from West Virginia University's School of Medicine in 1967. He had been a member of our Gloucester County component, engaged in the practice of neurology and psychiatry in Woodbury. Dr. Sibert's wife, Nancy, also a physician, preceded him in death, dying in 1982 at the untimely age of 40. Following her death, he withdrew from the practice of medicine for the exclusive practice of law.

Dr. Joseph W. Sloan

An orthopedic surgeon, with offices in Westwood, Joseph Wright Sloan, M.D., died on November 4, 1986. Born in New York City, in 1914, Dr. Sloan received his medical degree from the University of Maryland School of Medicine in 1940. He was a member of our Bergen County component and of the American Medical Association. Dr. Sloan was a Diplomate in orthopedic surgery, and had been affiliated with University Hospital, Newark, and Pascack Valley Hospital, Westwood. During World War II, he had served in the United States Public Health Service in both the Atlantic and European theaters of war. He is survived by a son, Kim W. Sloan, M.D., who shared the specialty and office with his father.

Dr. John B. Townsend

A retired Ocean City general practitioner, John Barratt Townsend, M.D., died at the venerable age of 92. A native of the state of Delaware, Dr. Townsend was graduated from Hahnemann Medical College in 1920. He was a member of our Cape May County component and of the American Medical Association. Dr. Townsend had been affiliated with Shore Memorial Hospital, Somers Point. In 1970, Dr. Townsend received MSNJ's Golden Merit Award.

Dr. Samuel M. Waterman

Samuel M. Waterman, M.D., a South Orange practitioner of family medicine, died on December 28, 1986. Born in 1907, Dr. Waterman was graduated from the University of Vermont's College of Medicine in 1932. He was a member of our Essex County component, and had been affiliated with Beth Israel Medical Center, Newark; the Hospital Center at Orange; and Saint Barnabas Medical Center, Livingston.

AUTHOR INFORMATION

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CONTENT

The educational content of each issue appears as scientific articles, based on research, original concepts relative to epidemiology of disease, and treatment methodology; case reports based on unusual clinical experiences; review articles; clinical notes, succinct items on some aspect or new observation or technique of a case experience; and special articles, which include evaluations, policy and position papers, and reviews of nonscientific subjects. Other topics include commentary (critical narration); medical history; therapeutic drug information; pediatric briefs; nutrition update; and an opinion column. Editorials are prepared by the Editor and by guest contributors on timely and relevant subjects; editorials are the responsibility of the author. The Doctors' Notebook section contains organizational, informational, and administrative items from MSNJ and from the community. Letters to the Editor and book reviews are welcome and will be published as space permits. The principal aim in the preparation of a contribution should be relevance to diagnosis and treatment and to education of patients and professionals. Preference will be given to professional authors from New Jersey and to out-of-state lecturers who submit a suitable manuscript based on a presentation made in New Jersey.

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The **summary** of the article should not exceed 250 words; it should contain only essential facts.

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1. Goldwyn RM: Subcutaneous mastectomy. *J Med Soc NJ* 74:1050-1052, 1977.
2. Dixon WJ, Massey FJ: *Introduction to Statistical Analysis.* New York, NY, McGraw-Hill, 1969, pp. 42-48.

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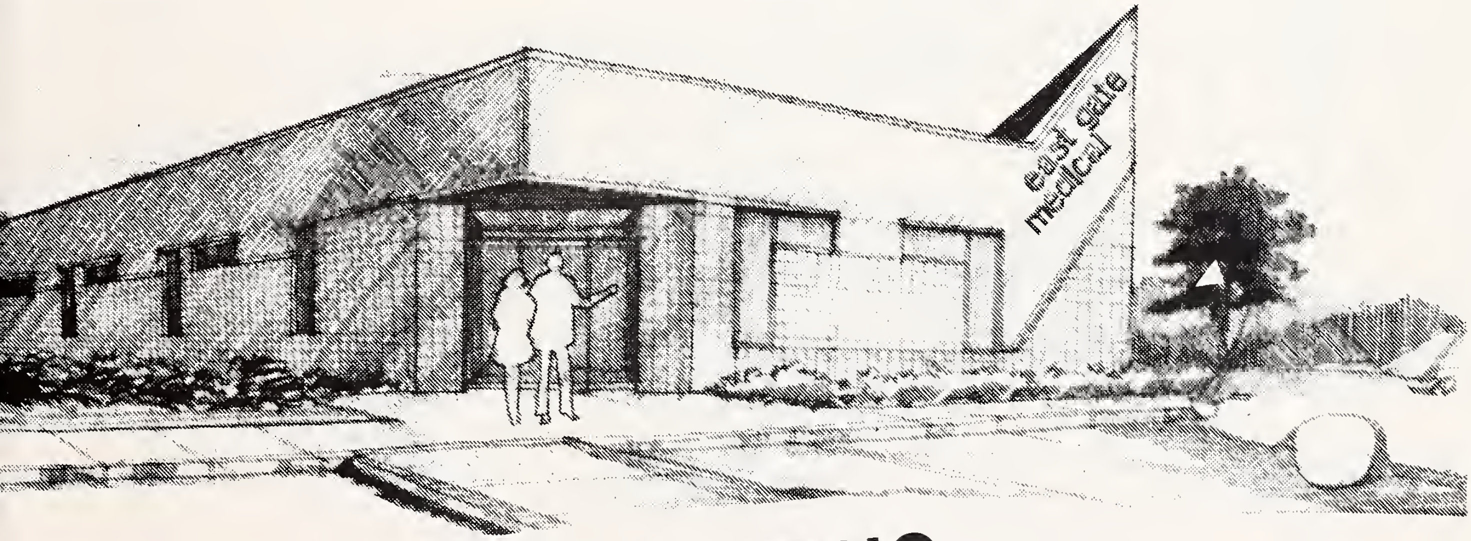

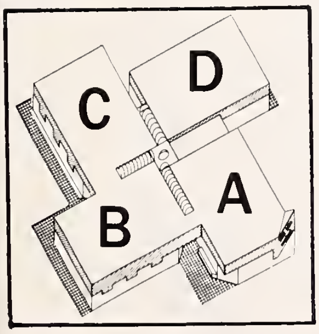

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Copy deadline: 5th of preceding month; Payment in advance; $5.00 first 25 words, 10¢ each additional. Count as one word all single words, two initials of name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count name and address as five words, telephone number as one word, Box No. 000, NEW JERSEY MEDICINE as five words.

AVAILABLE—GP/IM for 2 to 3 month periods in a busy office practice or clinic. Will consider permanent arrangement or partnership. 20 years of experience in the US, Ireland and England. Licensed in NJ, NY, PA, CT. Reply to Box No. 1034, Green Farms, CT 06436.

INTERNIST SEEKING—New opportunity. Permanently relocated to South Jersey, Board Certified, in practice six years. Please address inquiry to Box No. 240, NEW JERSEY MEDICINE.

INTERNIST SEEKING—New employment opportunity in a Group, Hospital or Clinic. Board Eligible with many years of practice in General Medicine. Please address inquiry to Box No. 217, NEW JERSEY MEDICINE.

RADIOLOGIST—Need weekend coverage? Rising PGY-4 Radiology Resident wants part-time work. NJ license, American trained, National Boards, ACLS, CT/US, fluoro, pediatrics. Please contact Box No. 238, NEW JERSEY MEDICINE.

NEEDED—Family Practitioner for Bucks County area in Pennsylvania. Two offices run by one physician. Great opportunity for BC/BE interested in eventual partnership. Competitive benefits offered. Please contact Box No. 227, NEW JERSEY MEDICINE.

NEEDED—Internist. Immediate opportunity for working partner in Monmouth County. Board Eligible, Board Certified. Internal Occupational Family Practice. Please call 201-290-0300.

NEEDED—Medical Director part-time, Board Certified. Speciality physical or developmental disabilities. Center services 500 infants to adults. To provide leadership of medical health related activities. Send resume and salary requirement to Box No. 242, NEW JERSEY MEDICINE.

NEEDED—Orthopedic. Immediate position available for Board Certified or Eligible physician. Join busy established, solo practice in rapidly growing Central New Jersey, near New York City. Generous salary, benefits, continued medical education time. Please send C.V. to Dante E. Sesin, M.D., 1001 West Main Street, Freehold, NJ 07728.

NEEDED—Pediatrician. Part-time, two days per week in Bucks County office. Board Certified/Eligible. Flexible arrangements, pleasant environment. On Call two weekends per month. Could result in a more extensive relationship. Please reply to Box No. 241, NEW JERSEY MEDICINE.

NEEDED—Physician, Board Certified/Board Eligible, June/July 1987 for Ambulatory Care Center in southern New Jersey, outside Philadelphia. Family Practice/Industrial Medicine. Full and part-time positions. Send CV to Box No. 233, NEW JERSEY MEDICINE.

NEEDED—Physicians for successful well-known, walk-in medical office center in Central New Jersey. Full and part-time. Skilled and personable. American trained MDs. Send CV to E.V. McGinley, MD, 1005 N. Washington Avenue, Green Brook, NJ 08812. Call 201-968-8900.

NEEDED—Family Practitioner wanted to Associate with growing practice in Cherry Hill/Evesham/Mt. Laurel area. Please reply to 609-424-9472.

PRACTICE WANTED—General Family Physician looking to buy viable practice/clinic in Central South Jersey. Please respond to Box No. 232, NEW JERSEY MEDICINE.

PRACTICE WANTED—Internist seeks to purchase an established practice in Bergen or Essex County or Hanover, New Jersey. Able to assume practice immediately. Please write to Box No. 208, NEW JERSEY MEDICINE.

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PRACTICE FOR SALE—Retiring from established 40 year Family Practice in Hackensack area. Ideal corner office and home. Call 201-845-8451.

PRACTICE FOR SALE—Family Practice including considerable psychotherapy, Haddonfield, NJ. Physician retiring, available immediately, gross over $200,000/yr. Included—equipment, furniture, practice, records and other amenities. Please reply to Box No. 230, NEW JERSEY MEDICINE.

PRACTICE FOR SALE—Family Practice established 40 years. Morris County, NJ. Suitable for 2 MDs. 350K gross. No OB or Surgery. One hour New York City. Good coverage. Outstanding schools and recreation. Box No. 236, NEW JERSEY MEDICINE.

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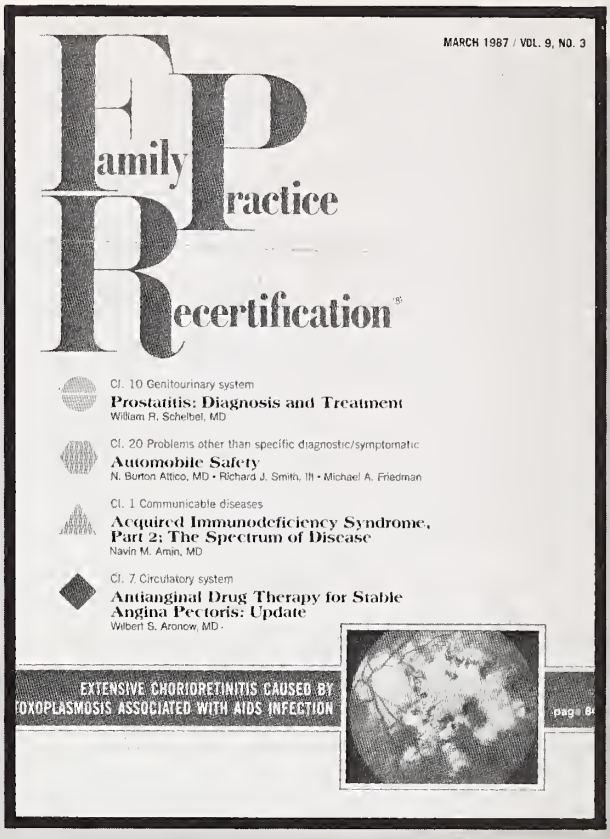

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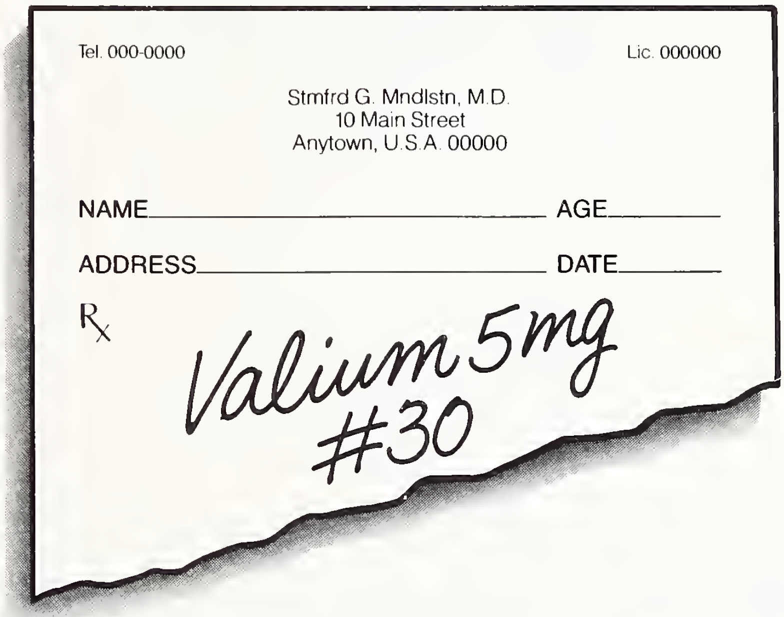

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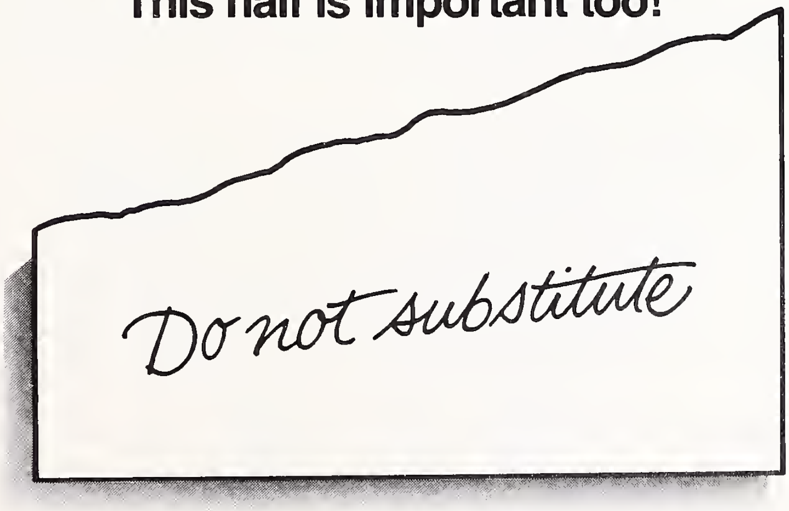

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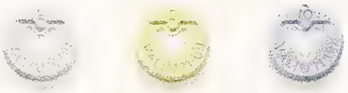

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